SONY

User Guide

Personal Computer
VGN-UX400 Series

VAIO

Contents

Before Use 6
ENERGY STAR 7
Documentation 8
Getting Started 12
Locating Controls and Ports 13
About the Indicator Lights 22
Holding Your Computer 24
Connecting a Power Source 26
Using the Battery Pack 27
Shutting Down Your Computer Safely 31
Using Your VAIO Computer 32
Using the Keyboard 33
Using the Touch Panel 34
Using the Pointing Device 36
Using Special-function Buttons 38
Blocking Unintentional Operations 39
Using the Built-in MOTION EYE Camera 41
Using the Memory Stick Media 45
Using the Internet 50
Using Wireless LAN (WLAN) 51
Using the Bluetooth Functionality 59

Using Peripheral Devices 67
Connecting the Port Replicator 68
Connecting the Display/LAN Adapter 74
Connecting an Optical Disc Drive 75
Connecting External Speakers 78
Connecting an External Display 79
Selecting Display Modes 84
Using the Multiple Monitors Function 85
Connecting an External Microphone 87
Connecting a Universal Serial Bus (USB) Device 88
Connecting a Printer 91
Connecting an i.LINK Device 92
Connecting to a Network (LAN) 93
Customizing Your VAIO Computer 94
Setting the Password 95
Using Fingerprint Authentication 106
Setting Up Your Computer with VAIO Control Center 114
Using the Power Saving Modes 115
Managing Power with VAIO Power Management 119

Precautions 121
On Handling the LCD Screen 122
On Using the Power Source 123
On Handling Your Computer 124
On Using the Built-in MOTION EYE Camera 126
On Handling Floppy Disks 127
On Handling Discs 128
On Using the Battery Pack 129
On Using Headphones 131
On Handling Memory Stick Media 132
On Using the Folding Stand 133
On Using the Adapter Holding Band 135
On Using the Wrist Strap 136
On Replacing the Multi-pointer Cap 137
On Updating Your Computer 138

Troubleshooting 139
Computer 141
System Security 150
Battery 151
Built-in MOTION EYE Camera 153
Networking 156
Bluetooth Technology 159
Optical Discs 163
Display 164
Printing 170
Microphone 171
Speakers 172
Pointing Device 173
Keyboard 175
Floppy Disks 176
Audio/Video 177
Memory Stick Media 178
Peripherals 179
Support Options 180
Sony Support Information 180
Program Support Information 184

Before Use

Congratulations on your purchase of this Sony VAIO® computer, and welcome to the on-screen User Guide. Sony has combined leading-edge technology in audio, video, computing, and communications to provide state-of-the-art personal computing experience.

!
External views illustrated in this manual may look slightly different from those of your computer.

ENERGY STAR

As an ENERGY STAR Partner, Sony has determined that this product meets the ENERGY STAR guidelines for energy efficiency.
The International ENERGY STAR Office Equipment Program is an international Program that promotes energy saving through the use of computers and their office equipment. The program backs the development and dissemination of products with functions that effectively reduce energy consumption.

For detailed information on the ENERGY STAR Program, visit the following Web sites:

- http://www.energystar.gov (USA)
- http://www.eu-energystar.org (Europe)

This computer is designed based on the ENERGY STAR standards and delivered with the following power saving settings:

- The LCD backlight is turned off automatically after inactivity of about 15 minutes.
- The computer enters Sleep mode automatically after inactivity of about 30 minutes.

Press any key to bring the computer back into Normal mode.

For detailed information on power saving modes, see **Using the Power Saving Modes (page 115)**.

Documentation

Your documentation includes printed information and user guides to read on your VAIO computer.

Printed Documentation

- **Welcome mat** — Contains an overview of components connection, set-up information, etc.
- **Safety Information** — Contains safety guidelines and owner information.

Non-printed Documentation

- **User Guide** (this manual) — Explains features of your computer. It also includes information about the software programs included with your computer, as well as information on solving common problems. **User Guide** is provided in the PDF format, which you can easily browse through and print out.

  ✍
  To go to Web sites described in this manual by clicking their respective URLs beginning with http://, your computer must be connected to the Internet.

- **Specifications** — The online **Specifications** describe the hardware and software configurations of your VAIO computer.

  To view the online **Specifications**:

  1. Connect to the Internet.
  2. Go to the Sony online support Web site at the following URLs:
     http://esupport.sony.com/EN/VAIO/ for customers in USA
     http://www.sony.ca/support for customers in Canada
     http://esupport.sony.com/ES/VAIO/ for customers in Spanish speaking Latin American countries or areas
     http://esupport.sony.com/ES/VAIO/BR/ for customers in Brazil

- **VAIO Recovery Center User Guide** — Provides information about restoring individual software programs, software drivers, and drive partition(s) or your entire hard disk drive to the original factory installed settings.

  To access this on-screen guide:

  1. Click **Start** and **Help and Support**.
  2. Click **Manuals & Specifications**.
  3. Click **VAIO Recovery Center User Guide**.

- **SmartWi™ Connection Utility Help** (Selected models only) — Provides information about setting up Bluetooth, wireless LAN, and wireless WAN functionalities.

  To access this on-screen guide:

  1. Click **Start**, **All Programs**, and **SmartWi Connection Utility**.
  2. Click **SmartWi Connection Utility Help**.

Help and Support

Help and Support is easy to access and provides a single location for information and technical assistance for your VAIO computer. Choose from the following categories to find the answers you need.

To access **Help and Support**, click **Start** and **Help and Support**.

- **Manuals & Specifications**
  Here you will find the on-screen **User Guide**, warranty information, other VAIO documents, and system and software information for your computer.
- **VAIO Support**
  Access interactive help in the form of VAIO tutorials, an escalation page containing support and contact information, and various links to VAIO online support Web sites.
- **Backup & Recovery**
  Find information on how to back up and restore your operating system, system software, and your personal data.
- **Wireless & Networking**
  Learn about wireless connections including Bluetooth Wireless technology and Wireless LAN. Run utilities that include **VAIO Media Setup** and **Windows Network and Sharing Center**, and access to wireless tutorials.
- **Security**
  Keep your data safe and your computer running efficiently with updates and maintenance programs from Microsoft and Sony.
- **VAIO Sites**
  Contains links to other Internet sites you might find interesting and useful.
- **VAIO Tutorials**
  Sony VAIO provides guided help tutorials that help you accomplish a task. It can either perform the task for you or show you how to do it step by step.

- **VAIO Registration**
  Please take a moment to register your VAIO computer to enjoy the following benefits:
  - Your computer will be registered with Sony Product Support.
  - You will receive an e-coupon good for purchase of eligible accessories at SonyStyle.com.
- **Extended Service Plan**
  Sony VAIO products come with a 1 year Limited Warranty. Protect your investment further by purchasing an optional Extended Service Plan.

Getting Started

This section describes how to get started using your VAIO computer.

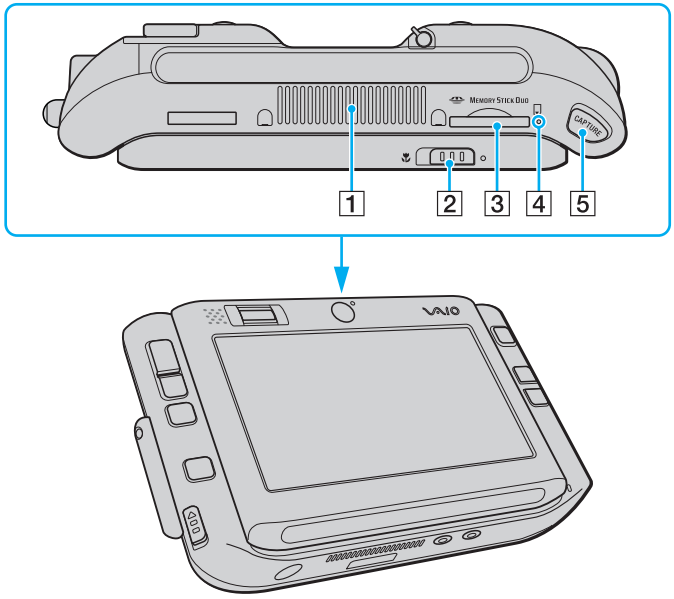
!
Before starting your computer for the first time, do not connect any other hardware that did not originally come with your computer. Be sure to start up your computer with only the supplied accessories connected and set up your system. Upon completion, connect one device (for example, a printer, an external hard disk drive, a scanner, and so on) at a time, following the manufacturers' instructions.

- **Locating Controls and Ports** (page 13)
- **About the Indicator Lights** (page 22)
- **Holding Your Computer** (page 24)
- **Connecting a Power Source** (page 26)
- **Using the Battery Pack** (page 27)
- **Shutting Down Your Computer Safely** (page 31)

Locating Controls and Ports

Take a moment to identify the controls and ports shown on the following pages.

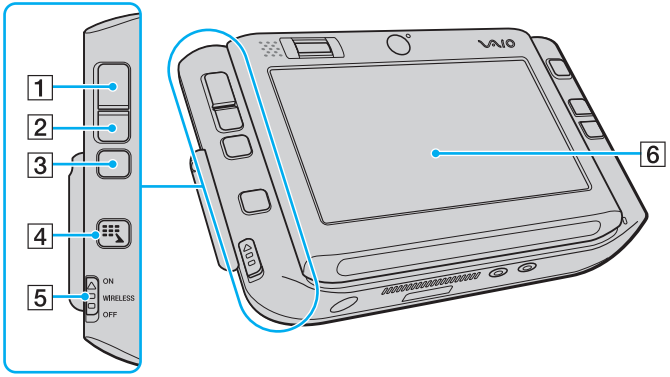
Top



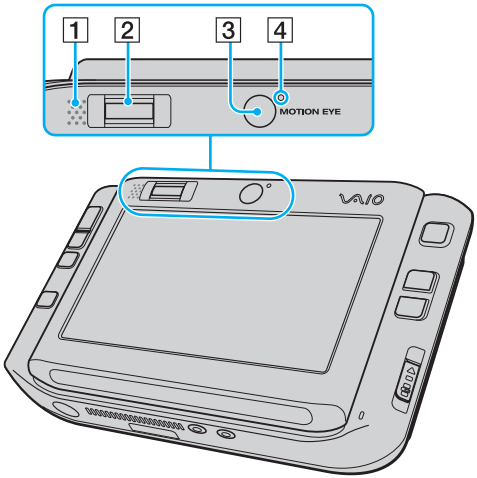
1 Air vent
2 Focus selection switch (page 41)
3 Memory Stick slot* (page 46)
4 Memory Stick indicator (page 22)
5 **CAPTURE** button (page 41)

* Your computer supports Duo-size Memory Stick media only.

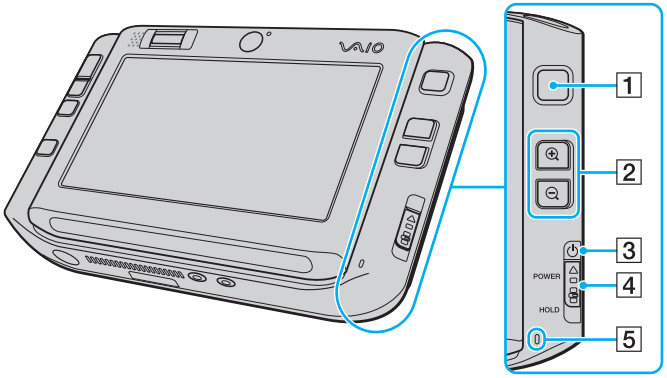
Front



1 Left button (page 36)
2 Right button (page 36)
3 Center button (page 36)
4 Launcher button (page 38)
5 **WIRELESS** switch (page 51)
6 Touch panel LCD screen (page 34)

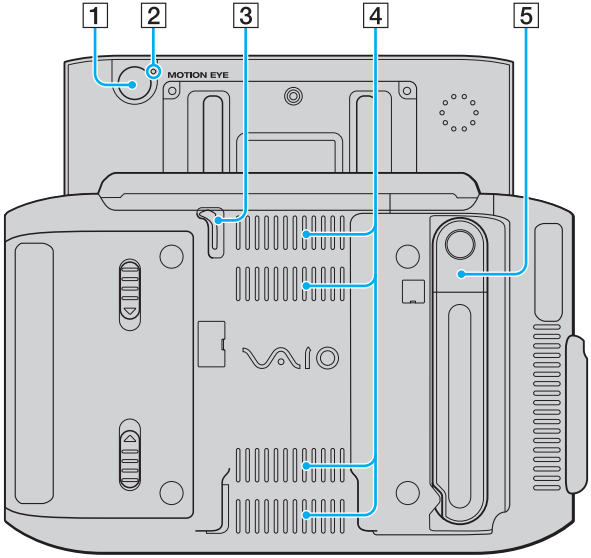


1 Built-in speaker (monaural)
2 Fingerprint sensor (page 106)
3 Front camera (**MOTION EYE**) (page 41)
4 Front camera (**MOTION EYE**) indicator (page 22)



1 Multi-pointer (page 36)
2 Zoom In/Out buttons (page 38)
3 Power indicator (page 22)
4 **POWER** switch
5 Built-in microphone (monaural)

Back



1 Rear camera (**MOTION EYE**) (page 41)

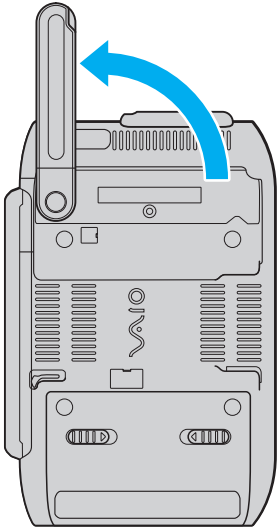
2 Rear camera (**MOTION EYE**) indicator (page 22)

3 Stylus
Slide up and pull out the stylus for touch panel operations.

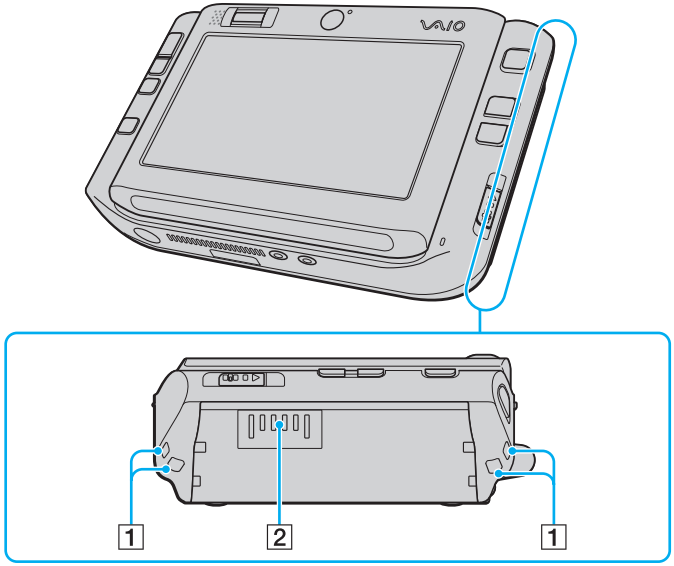
4 Air vents

5 WWAN antenna*
When using your computer in the vertical orientation, rotate the antenna by 90 degrees counterclockwise.

* On selected models only.



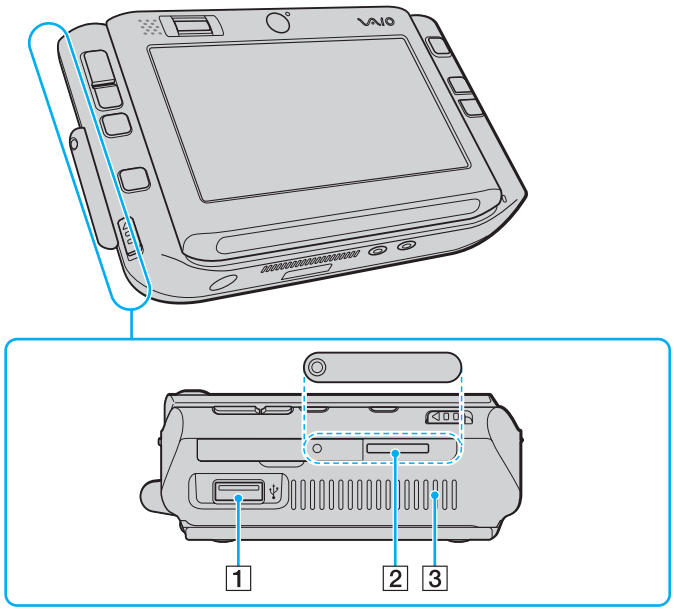
Right



1 Strap holes
Fasten the supplied wrist strap to your computer through either hole.

2 Battery connector (page 27)

Left



1 Hi-Speed USB (USB 2.0) port*1 (page 88)

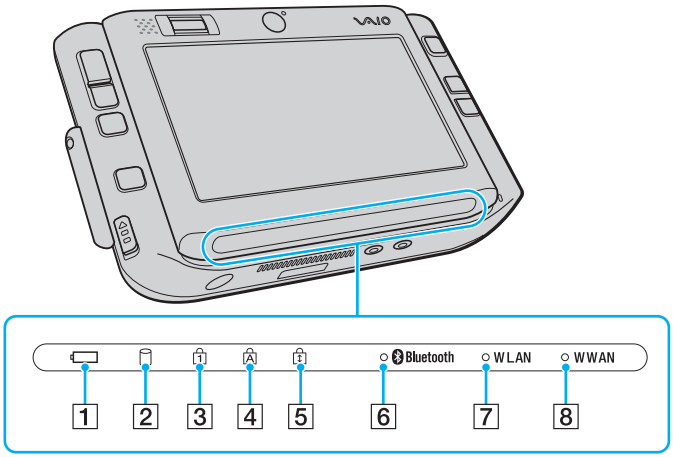
2 SIM card slot*2
Unscrew the screw and remove the cover to access the SIM card slot. See the **SmartWi Connection Utility Guide** for more information.

3 Air vent

*1 Supports high-/full-/low- speeds.

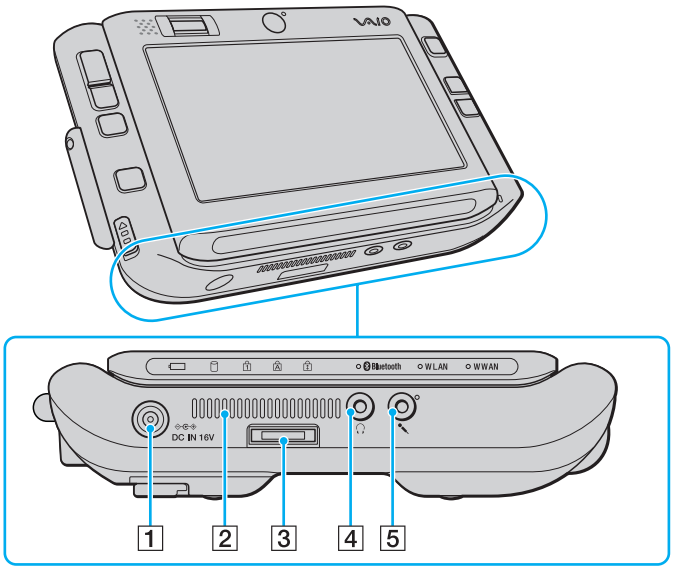
*2 On selected models only.

Bottom



1 Battery indicator (page 22)
2 Hard disk drive indicator (page 22)
3 Num lock indicator (page 22)
4 Caps lock indicator (page 22)
5 Scroll lock indicator (page 22)
6 **Bluetooth** indicator (page 22)
7 **WLAN** (Wireless LAN) indicator (page 22)
8 **WWAN** (Wireless WAN) indicator* (page 22)

* On selected models only.



1 **DC IN** port (page 26)
2 Air vent
3 I/O connector (page 74)
4 Headphones jack (page 78)
5 Microphone jack (page 87)

About the Indicator Lights

Your computer is equipped with the following indicator lights.

Indicator	Functions
Power	Illuminates when the power of the computer is on, blinks when the computer is in Sleep mode, and turns off when the computer is in Hibernate mode or off.
Battery	Illuminates when the computer is using battery power, blinks when the battery pack is running out of power, and double-blinks when the battery pack is charging.
Memory Stick	Illuminates when data is read from or written to the Memory Stick media in the Memory Stick slot. (Do not enter Sleep mode or turn off the computer when this indicator is on.) When the indicator is off, the Memory Stick media is not being used.
Front/Rear camera (**MOTION EYE**)	Illuminates while the corresponding built-in **MOTION EYE** camera is in use.
Hard disk drive	Illuminates when data is read from or written to the built-in flash memory storage. Do not enter Sleep mode or turn off the computer when this indicator is on.
Num lock	Press and hold the **Fn** key and press the **Num Lk** key to activate the numeric keypad. Press it a second time to deactivate the numeric keypad. The numeric keypad is not active when the indicator is off.
Caps lock	Press the **Caps Lock** key to type letters in uppercase. Letters appear in lowercase if you press the **Shift** key while the indicator is on. Press the key a second time to turn off the indicator. Normal typing resumes when the Caps lock indicator is off.
Scroll lock	Press and hold the **Fn** key and press the **Scr Lk** key to change how you scroll the display. Normal scrolling resumes when the Scroll lock indicator is off. The **Scr Lk** key functions differently depending on the program you are using and does not work with all programs.
Bluetooth technology	Illuminates when the **WIRELESS** switch is set to **ON** and Bluetooth technology is enabled.
Wireless LAN	Illuminates when the wireless LAN functionality is enabled.

Indicator	Functions
Wireless WAN*	Illuminates when the wireless WAN functionality is enabled.

* On selected models only.

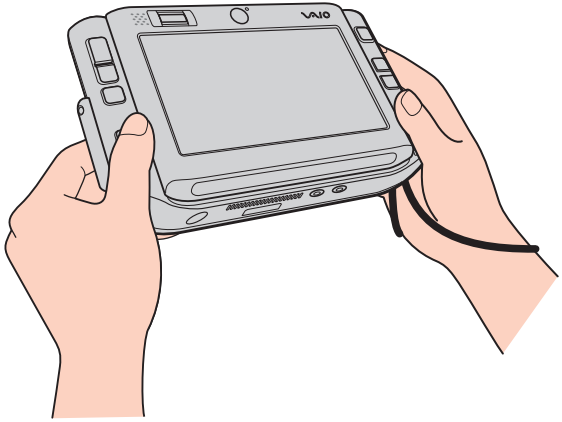
Holding Your Computer

You can hold and use your computer in either a horizontal or vertical orientation to suit your preferences.

!
In either orientation, make sure to fasten the supplied wrist strap to your computer and wear it to prevent accidental dropping of the computer from your palms.

❑ Horizontal orientation

This is the standard orientation of your computer and, by default, the buttons on the front are assigned the functions that help you use the computer comfortably in this orientation.

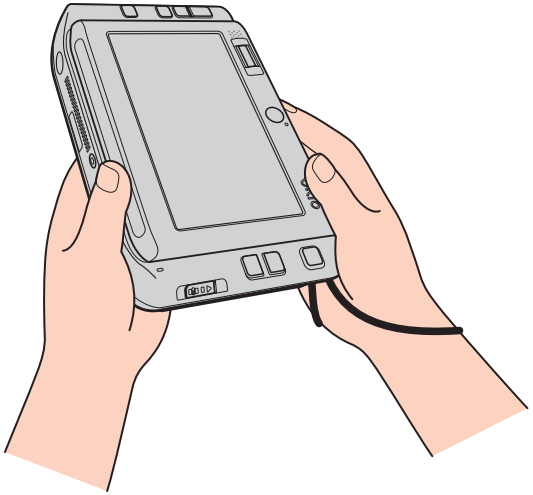


✍
You can change the default button assignments with **VAIO Control Center**. See **Setting Up Your Computer with VAIO Control Center** **(page 114)** and find out more in its help file.

The horizontal orientation is represented as Standard mode in **VAIO Control Center**.

❑ Vertical orientation

You can use your computer in this orientation with the help of the **VAIO Touch Launcher** software. Press the launcher button to start the software and select to rotate the screen view by 90 degrees clockwise.



✍ You might additionally want to change the default button assignments for easier operations, using **VAIO Control Center**.

The vertical orientation is represented as Rotational mode in **VAIO Control Center**.

Connecting a Power Source

You can use either an AC adapter or a rechargeable battery pack as a power source for your computer.

Using the AC Adapter

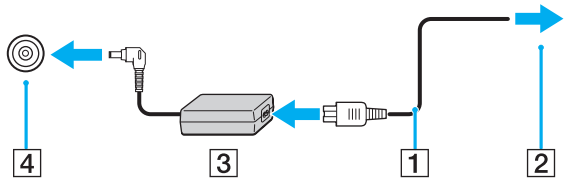
Use your computer only with the supplied AC adapter.

To use the AC adapter

1 Plug one end of the power cord (1) into the AC adapter (3).

2 Plug the other end of the power cord into an AC outlet (2).

3 Plug the cable connected to the AC adapter (3) into the **DC IN** port (4) on the computer or on the port replicator.



The shape of the DC In plug varies depending on the AC adapter.

To disconnect your computer completely from AC power, unplug the AC adapter.

Make sure that the AC outlet is easily accessible.

If you do not intend to use your computer for a long period of time, place the computer into Hibernate mode. See **Using Hibernate Mode** **(page 118)**. This power saving mode saves the time of shutting down and resuming.

Using the Battery Pack

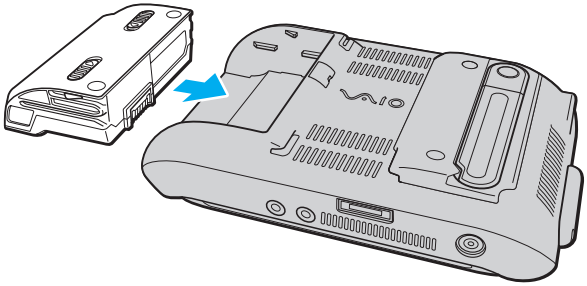
The battery pack supplied with your computer is not fully charged at the time of delivery.

Installing the Battery Pack

To install the battery pack

1 Turn off the computer.

2 Slide the battery pack into the battery compartment until it clicks into place.



When your computer is directly connected to AC power and has a battery pack installed, it uses power from the AC outlet.

This computer is designed to operate only with genuine Sony batteries.

Charging the Battery Pack

The battery pack supplied with your computer is not fully charged at the time of delivery.

To charge the battery pack

1 Install the battery pack.

2 Connect the AC adapter to the computer.
The computer automatically charges the battery pack (the battery indicator light flashes in a double blink pattern as the battery pack charges). When the battery pack is about 85% charged, the battery indicator turns off.

Battery indicator light status	Meaning
On	The computer is using battery power.
Blinks	The battery pack is running out of power.
Double blinks	The battery pack is charging.
Off	The computer is using AC power.

!
Charge the battery pack as described in this manual from your first battery charge.

✍
When the battery pack is running out of power, both the battery and power indicator lights blink.

Keep the battery pack in your computer while it is directly connected to AC power. The battery pack continues to charge while you are using the computer.

If the battery level falls below 10%, you should either connect the AC adapter to recharge the battery pack or shut down your computer and install a fully charged battery pack.

The battery pack supplied with your computer is a lithium ion battery pack and can be recharged any time. Charging a partially discharged battery pack does not affect the battery life.

The battery indicator light is on while you use the battery pack as a power source. When battery life is nearly depleted, both the battery and power indicator lights start flashing.

For some software applications and some peripheral devices, your computer may not enter Hibernate mode even when battery life is low. To avoid loss of data when using battery power, you should save your data frequently and manually activate a power management mode, such as Sleep or Hibernate.

If the battery pack wears out when the computer enters Sleep mode, you will lose all unsaved data. Going back to the previous work state is impossible. To avoid loss of data, you should save your data frequently.

When your computer is directly connected to AC power and has a battery pack installed, it uses power from the AC outlet.

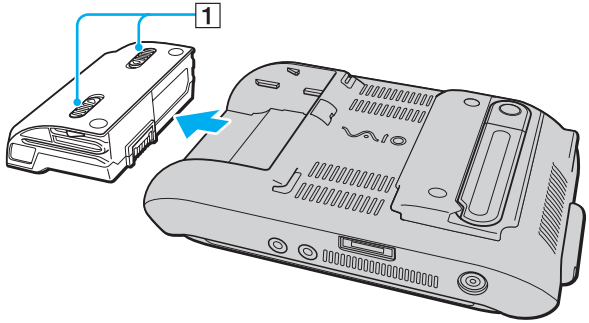
Removing the Battery Pack

!
You may lose data if you remove the battery pack while your computer is on and not connected to the AC adapter or if you remove the battery pack while the computer is in Sleep mode.

To remove the battery pack

1 Turn off the computer.

2 Slide the battery release latches (1) inwards, hold the latches, and slide the battery pack away from the computer.



Shutting Down Your Computer Safely

To avoid losing unsaved data, be sure to shut down your computer properly, as described below.

To shut down your computer

1. Turn off any peripherals connected to the computer.
2. Click **Start**, the arrow next to the **Lock** button, and **Shut Down**.
3. Respond to any prompts warning you to save documents or to consider other users and wait for the computer to turn off automatically.
   The power indicator light turns off.

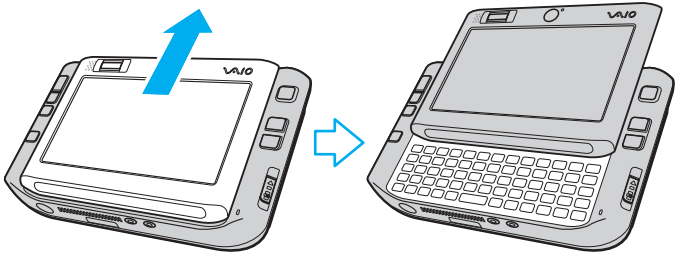
Using Your VAIO Computer

This section describes how to get the most out of using your VAIO computer.

- **Using the Keyboard (page 33)**
- **Using the Touch Panel (page 34)**
- **Using the Pointing Device (page 36)**
- **Using Special-function Buttons (page 38)**
- **Blocking Unintentional Operations (page 39)**
- **Using the Built-in MOTION EYE Camera (page 41)**
- **Using the Memory Stick Media (page 45)**
- **Using the Internet (page 50)**
- **Using Wireless LAN (WLAN) (page 51)**
- **Using the Bluetooth Functionality (page 59)**

Using the Keyboard

The keyboard on your computer is located underneath the touch panel LCD screen. Slide up the screen to reveal the keyboard as shown below for operations.

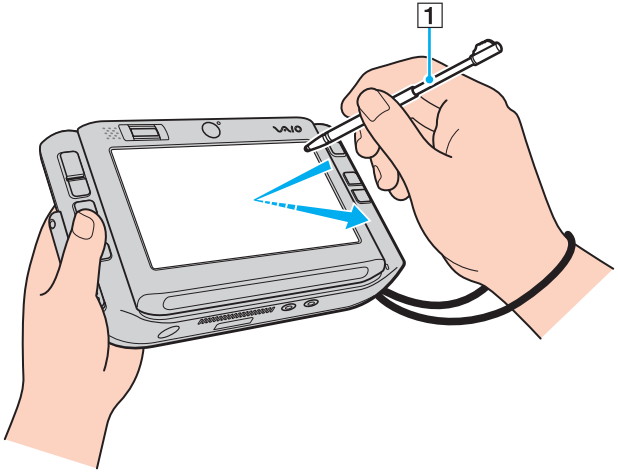


!
Keep your fingers off the screen surface while sliding up the touch panel LCD screen.

Using the Touch Panel

Your computer is equipped with the touch panel LCD screen for operations with the stylus (1), including software launches.

!
Make sure to use only the supplied stylus for touch panel operations. Use of any other writing utensils, such as a ball-point pen, may damage the touch panel surface.



Take out the stylus from the back of your computer and use it for the following actions on the touch panel LCD screen. This stylus is extendable. Slide it out to its full length if necessary.

See **Back (page 17)** for the exact location of the stylus stored on the back of your computer.

Action	Description
Tap	Gently hit the stylus once against the touch panel LCD screen.
Double-tap	Gently hit the stylus twice against the touch panel LCD screen.
Drag	Slide the stylus gently on the touch panel LCD screen.

✍
At your very first Windows startup, you are prompted to calibrate the touch panel for smooth operations. Follow the on-screen instructions. You can calibrate the touch panel at any time later when you feel uncomfortable with using it. Click **Start**, **All Programs**, **Touch Panel**, and **Calibration** and follow the on-screen instructions.

You can customize your touch panel settings with **VAIO Control Center** to perform the right-clicking action with the stylus. See **Setting Up Your Computer with VAIO Control Center** **(page 114)** and find out more in its help file.

Using Touch Commands

Touch commands are provided to substitute for actions that are needed to perform certain software operations. For example, you can drag your stylus to the left to view the previous page on your active browser software.

To enable touch commands, press on the touch panel LCD screen for a few seconds. **VAIO TOUCH COMMAND** appears on the desktop to indicate the commands are now available.

Some touch commands are defined by default. You can change the assignment of these default touch commands with **VAIO Control Center**. See **Setting Up Your Computer with VAIO Control Center** **(page 114)** and find out more in its help file.

Using the Pointing Device

Your computer is equipped with a cursor-pointing device, the multi-pointer (1), to enable you to point to, select, drag, and scroll objects on the computer screen.

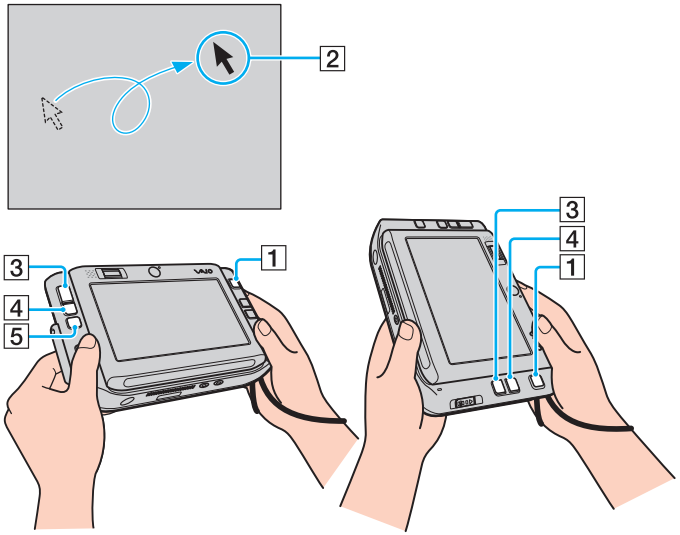
Push the multi-pointer in the direction that you want to move the pointer on the screen. The harder you push the multi-pointer, the faster moves the pointer.

The following shows the default button assignments in the horizontal orientation (left) and the vertical orientation (right).

You can use **VAIO Control Center** to change these button assignments. See **Setting Up Your Computer with VAIO Control Center** **(page 114)** and find out more in its help file.

!

To enable the default button assignments in the vertical orientation, you must select on **VAIO Touch Launcher**.



Action	Description
Point	Push the multi-pointer (1) to place the pointer (2) on an item or object.
Click	Press the left button (3) once.
Double-click	Press the left button (3) twice.
Right-click	Press the right button (4) once. In many applications, this action displays a shortcut menu.
Drag	Push the multi-pointer (1) while pressing the left button (3).
Scroll	Push the multi-pointer (1) while pressing the center button (5). ✍ In the vertical orientation, you can press the left and right buttons simultaneously to substitute for the center button that is available in the standard orientation. ! The scroll function is available only with applications that support the scroll feature.

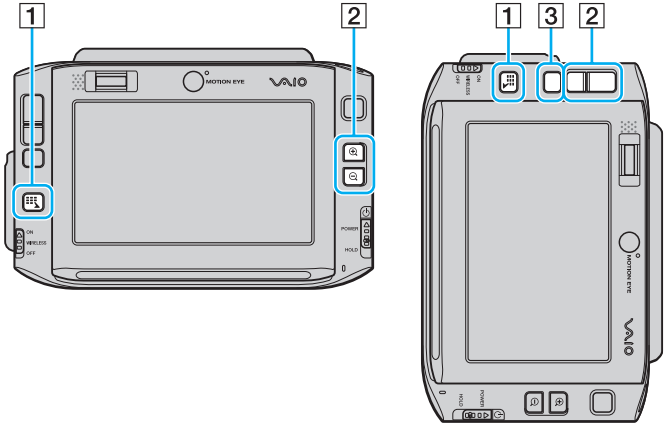
✍
The pointer may move on its own in rare occasions, which does not indicate a malfunction. Leave the multi-pointer untouched for a while. The pointer will come to a halt.

The cap at the tip of the multi-pointer is a consumable. When it wears out, replace it with one of the supplied spare caps. See **On Replacing the Multi-pointer Cap** **(page 137)** for more information on replacement.

Using Special-function Buttons

Your computer is equipped with special buttons to help you use specific functions of the computer.

The following shows the special buttons in the horizontal orientation (left) and the vertical orientation (right).



1 Launcher button

Launches **VAIO Touch Launcher** by default. You can change this button assignment with **VAIO Control Center**. See **Setting Up Your Computer with VAIO Control Center** **(page 114)** and find out more in its help file.

2 Zoom In/Out buttons

Make the screen view zoom in or zoom out.

Each click makes the screen view zoom in or out by 0.5 on a scale of 1 to 3 and cycles when zooming reaches its maximum or minimum level.

To restore the screen view in the actual size, click that appears on the magnified screen view.

To help you navigate on the magnified screen view, the hand tool is available to grasp a point on the view and drag it around. To use the hand tool, click on the magnified screen view. The pointer changes its shape to a hand-like one, indicating that the hand tool is now selected.

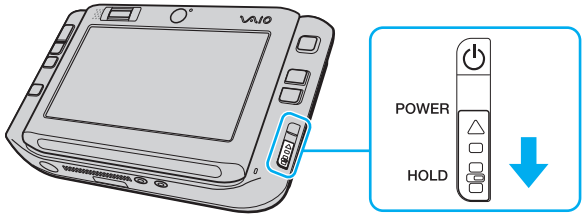
To restore the standard pointer, click .

3 Rotate button

Restores the standard screen view.

Blocking Unintentional Operations

While you are carrying your computer around, you might press a button on the computer unintentionally and find an operation that you never expected in progress. To block such unintentional operations, your computer is provided with the function to lock certain components of the computer. Slide down the power switch to the **HOLD** position (in the opposite direction of △ on the switch) until it clicks into place. You will see the color of the hole on the power switch turns orange. Additionally, your computer screen will display a message and go blank to conserve power.



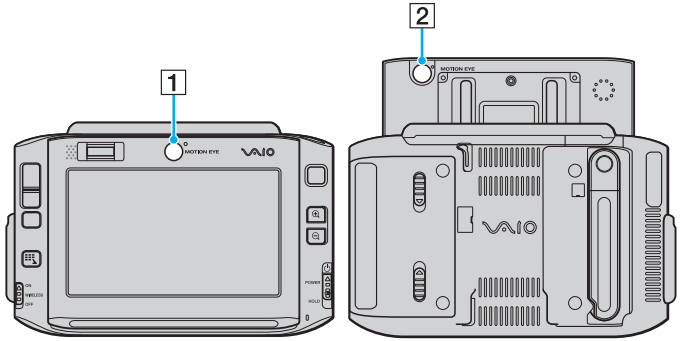
The components to be locked by this function are as follows:

- Touch panel
- Keyboard
- Left button
- Right button
- Center button
- Launcher button
- Multi-pointer
- Zoom In/Out buttons
- **CAPTURE** button
- Fingerprint sensor

Activating this function will turn off the touch panel LCD screen and the screen will go blank. To bring your computer back into Normal mode, slide up the power switch (in the direction of △ on the switch).

Using the Built-in MOTION EYE Camera

Your computer is equipped with two built-in **MOTION EYE** cameras: front camera (**MOTION EYE**) (1) and rear camera (**MOTION EYE**) (2). These cameras are not designed for simultaneous use, so you must first select the one that is suitable for your purpose, using **VAIO Camera Utility**. This utility will automatically launch when you start the software that uses the camera. For more information on **VAIO Camera Utility**, see the help file on the software.



- Front camera (**MOTION EYE**) (1)

  Use this camera for video conferences with instant messaging software.

- Rear camera (**MOTION EYE**) (2)

  Use this camera for capturing still images and movies with **VAIO Camera Capture Utility**. For the detailed operation instructions, see the help file on **VAIO Camera Capture Utility**.

!
VAIO Camera Capture Utility does not allow parallel use of the camera by any other software. Make sure to exit such software before capturing still images and movies with **VAIO Camera Capture Utility**.

You cannot use the front and rear cameras at the same time.

When the screen view is rotated, the front and rear cameras are both disabled.

To use the rear camera (**MOTION EYE**), make sure to slide up the touch panel LCD screen.

The finder view on the main window shows mirrored image streams. This is normal and captured still images will not be mirrored.

The finder view on the main window may show some noise, for example horizontal streaks, if you view a rapid-moving object. This is normal and does not indicate a malfunction.

You cannot operate the built-in **MOTION EYE** camera with the **Microsoft Windows MovieMaker** software.

Capturing Still Images

To capture a still image

1 Press the **CAPTURE** button on your computer to launch **VAIO Camera Capture Utility**.

2 Click the **Still** icon in the right pane of the utility's main window.

3 Turn the camera to your subject.

4 For macro closeup capturing, slide the focus selection switch to the position.

! The focus selection switch is only effective for the rear camera (**MOTION EYE**).

The focusing distance for closeup capturing is approximately 2.8 inches (7 cm) from the lens.

5 Press the **CAPTURE** button on your computer.
The current image in the finder view is captured and its thumbnail image is added to the thumbnail view at the bottom of the main window.

VAIO Camera Capture Utility provides many more features. See the help file on the software for more information.

Capturing Movies

To capture a movie

1 Press the **CAPTURE** button on your computer to launch **VAIO Camera Capture Utility**.

2 Click the **Movie** icon in the right pane of the utility's main window.

3 Turn the camera to your subject.

4 For macro closeup capturing, slide the focus selection switch to the position.

! The focus selection switch is only effective for the rear camera (**MOTION EYE**).

The focusing distance for closeup capturing is approximately 2.8 inches (7 cm) from the lens.

5 Press the **CAPTURE** button on your computer to start movie recording.

6 When finished, press the **CAPTURE** button once again to stop movie recording.
The first scene of the captured movie is added to the thumbnail view at the bottom of the main window.

VAIO Camera Capture Utility provides many more features. See the help file on the software for more information.

Using the Memory Stick Media

Memory Stick media is a compact, portable, and versatile IC recording media especially designed for exchanging and sharing digital data with compatible products, such as digital cameras, mobile phones and other devices. Because it is removable, it can be used for external data storage.

Before You Use the Memory Stick Media

The Memory Stick slot on your computer can accommodate only Duo-size media and support Memory Stick PRO and Memory Stick PRO-HG Duo media with high speed and high capacity capabilities.

! Before using a Memory Stick Micro media, be sure to insert it into an M2 Duo-size Adaptor. If you insert the media directly into the Memory Stick slot without the Adaptor, you may not be able to remove it from the slot.

For the latest information about the Memory Stick media, visit the Memory Stick Web site at http://www.memorystick.com/en/.

! Your computer has been tested and found compatible with Sony branded Memory Stick media with capacity of up to 8 GB that are available as of May 2007. However, not all Memory Stick media that meet the same specifications as the compatible media are guaranteed of compatibility.

Inserting a Memory Stick media with multiple conversion adapters is not guaranteed of compatibility.

MagicGate is the general name of the copyright protection technology developed by Sony. Use a Memory Stick media with the MagicGate logo to use this feature.

Besides for your personal use, it is against the copyright law to use any audio and/or image data you recorded without prior consent from the respective copyright holders. Accordingly, Memory Stick media with such copyrighted data can be used only within the law.

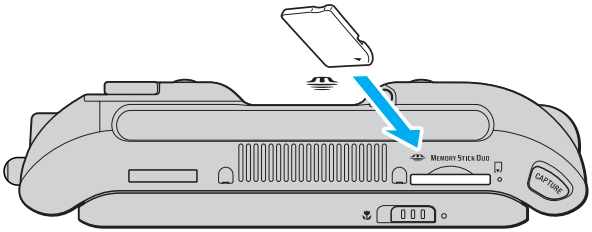
The Memory Stick slot on your computer does not support 8-bit parallel data transfer (high speed data transfer).

Inserting a Memory Stick Media

To insert a Memory Stick media

1 Hold the Memory Stick media so that the arrow surface of the media and the front of the computer face in the same direction and the arrow points toward the Memory Stick slot.

2 Carefully slide the Memory Stick media into the slot until it clicks into place.
The Memory Stick media is automatically detected by your system and the content of the Memory Stick media is displayed. If nothing appears on the desktop, click **Start**, **Computer**, and double-click the Memory Stick media icon.



!
Be sure to hold the Memory Stick media with the arrow pointing in the correct direction as you insert it into the slot. To avoid damaging your computer or the Memory Stick media, do not force the Memory Stick media into the slot if you cannot insert it smoothly.

Do not insert more than one Memory Stick media into the slot. Improper insertion of the media may damage both your computer and the media.

To view the contents of the Memory Stick media

1 Click **Start** and **Computer** to open the **Computer** window.

2 Double-click the Memory Stick media icon to view the list of data files saved in the Memory Stick media.

To format a Memory Stick media

The Memory Stick media has been formatted in the factory default setting and is ready for use.
If you want to reformat the media with your computer, follow these steps.

!
Be sure to use the device that is designed to format the media and supports the Memory Stick media when formatting the media.

Formatting the Memory Stick media erases the entire data on the media. Before formatting the media, make sure that it does not contain your valuable data.

Do not remove the Memory Stick media from the slot while formatting the media. This could cause a malfunction.

1. Carefully slide the Memory Stick media into the slot until it clicks into place.
2. Click **Start** and **Computer** to open the **Computer** window.
3. Right-click the Memory Stick media icon and select **Format**.
4. Click **Restore device defaults**.

!
The size of the allocation unit and file system may change.

Do not select **NTFS** from the **File system** drop-down list as it may cause a malfunction.

✍
The formatting process will be completed more quickly if you select **Quick Format** in **Format options**.

5 Click **Start**.

6 At the confirmation prompt, click **OK**.
The formatting process starts.

!
It may take time to format the Memory Stick media depending on the media.

7 Once completed, click **OK**.

8 Click **Close**.

Removing a Memory Stick Media

To remove a Memory Stick media

1 Check that the Memory Stick indicator is off.

2 Push the Memory Stick media in toward the computer.
The Memory Stick media ejects.

3 Pull the Memory Stick media out of the slot.

!
Always remove the Memory Stick media gently, or it may pop out unexpectedly.

Do not remove the Memory Stick media while the Memory Stick indicator is on. If you do, you may lose data. Large volumes of data may take time to load, so be sure the indicator is off before removing the Memory Stick media.

Using the Internet

To use the Internet, you need to connect an external modem device, for example a USB telephone modem, an xDSL modem, or a cable modem, to your computer. For the detailed instructions on connection setups and modem configuration, see the manual that came with your modem.

You may also access the Internet through your wireless WAN network. See the **SmartWi Connection Utility Help** for more information.

Using Wireless LAN (WLAN)

Using the Sony Wireless LAN (WLAN), all your digital devices with built-in WLAN functionality communicate freely with each other through a network. A WLAN is a network in which a user can connect to a Local Area Network (LAN) through a wireless (radio) connection. So there is no need anymore to pull cables or wires through walls and ceilings.

The Sony WLAN supports all normal Ethernet connectivity, but with the added benefits of mobility and roaming. You can still access information, Internet/intranet and network resources, even in the middle of a meeting, or as you move from one place to another.

You can communicate without an access point, which means that you can communicate with a limited number of computers (ad-hoc). Or you can communicate through an access point, which allows you to create a full infrastructure network.

- Customers in USA
  See the **SmartWi Connection Utility Help** for setting up wireless LAN and wireless WAN functionalities. For instructions on how to access the **SmartWi Connection Utility Help,** see **Non-printed Documentation** **(page 8)**.
- Customers in other countries or areas
  See the following for setting up wireless LAN functionality.

In some countries, using WLAN products may be restricted by the local regulations (e.g. limited number of channels). Therefore, before activating the WLAN functionality, read the **Safety Information** carefully.

WLAN uses the IEEE 802.11a*/b/g standard or the draft form of the IEEE 802.11n* standard, which specifies the used technology. The standard includes the encryption methods: Wired Equivalent Privacy (WEP), which is a security protocol, Wi-Fi Protected Access 2 (WPA2), and Wi-Fi Protected Access (WPA). Proposed jointly by the IEEE and Wi-Fi Alliance, both WPA2 and WPA are specifications of standards based, interoperable security enhancements that increase the level of data protection and access control for existing Wi-Fi networks. WPA has been designed to be forward compatible with the IEEE 802.11i specification. It utilizes the enhanced data encryption TKIP (Temporal Key Integrity Protocol) in addition to user authentication using 802.1X and EAP (Extensible Authentication Protocol). Data encryption protects the vulnerable wireless link between clients and access points. Besides that, there are other typical LAN security mechanisms to ensure privacy, such as: password protection, end-to-end encryption, virtual private networks, and authentication. WPA2, the second generation of WPA, provides stronger data protection and network access control and is also designed to secure all versions of 802.11 devices, including 802.11b, 802.11a, 802.11g, and 802.11n, multi-band and multi-mode. In addition, based on the ratified IEEE 802.11i standard, WPA2 provides government grade security by implementing the National Institute of Standards and Technology (NIST) FIPS 140-2 compliant AES encryption algorithm and 802.1X-based authentication. WPA2 is backward compatible with WPA.

* See the online **Specifications** to see whether your model supports the IEEE 802.11a standard and/or the draft form of the IEEE 802.11n standard.

IEEE 802.11b/g is a wireless LAN standard, using the 2.4 GHz bandwidth. The IEEE 802.11g standard provides high-speed communications, faster than the IEEE 802.11b standard.

IEEE 802.11a is a wireless LAN standard, using the 5 GHz bandwidth, and provides high-speed communications of up to 54 Mbps.

IEEE 802.11n is a wireless LAN standard, using the 2.4 or 5 GHz bandwidth, and provides high-speed communications of up to 300 Mbps*.

* Actual communication speed varies depending on your access point settings and so on.

Your computer may employ the Intel® Next-Gen Wireless-N technology* compliant with the IEEE 802.11a/b/g standard and the draft form of the IEEE 802.11n standard.

* Employed only on models that support the draft form of the IEEE 802.11n standard.

Wireless LAN devices using the 2.4 GHz bandwidth and the ones using the 5 GHz bandwidth cannot communicate with each other because the frequencies are different.

The 2.4 GHz bandwidth used by wireless LAN compatible devices is also used by other various devices. Although technologies to minimize interference from other devices that use the same bandwidth are employed on wireless LAN compatible devices, such interference may cause lower communication speed, narrower communication range, or broken wireless connections.

The communication speed varies depending on the distance between communication devices, existence of obstacles between such devices, the device configuration, the radio conditions, and the software in use. In addition, communications may be cut off depending on the radio conditions.

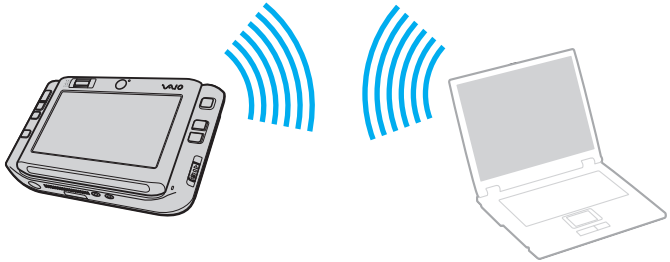
The communication range varies depending on the actual distance between communication devices, existence of obstacles between such devices, the radio conditions, the ambient environment that includes existence of walls and materials of such walls, and the software in use.

Deploying IEEE 802.11b and IEEE 802.11g products on the same wireless network may reduce the communication speed due to radio interference. Taking this into consideration, the IEEE 802.11g products are designed to reduce the communication speed to ensure communications with IEEE 802.11b products. When the communication speed is not as fast as expected, changing the wireless channel on the access point may increase the communication speed.

Communicating without an Access Point (Ad-hoc)

An ad-hoc network is a network in which a LAN is created only by the wireless devices themselves, with no other central controller or access point. Each device communicates directly with other devices in the network. You can set up an ad-hoc network easily at home.

- If the wireless connection is initiated by the VAIO computer, channel 11 will be selected.
- If the wireless connection is initiated by peer wireless LAN equipment, the wireless LAN communication will make use of the channel selected by the peer wireless LAN equipment.



To communicate without an access point (ad-hoc)

!
You cannot select the 5 GHz bandwidth, which is used for the IEEE 802.11a standard, on ad-hoc networks.

The IEEE 802.11n standard, using the 2.4 or 5 GHz bandwidth, is not available on ad-hoc networks.

1. Turn on the **WIRELESS** or **WIRELESS LAN** switch.
   The Wireless LAN indicator lights up.
2. Double-click (B / LAN) on the taskbar to display the **Wireless Device Switch** window.
3. Select your desired wireless option(s) and click **OK**.
4. Click **Start** and **Control Panel**.
5. Click **View network status and tasks** under **Network and Internet**.
6. Click **Set up a connection or network** on the left pane.
   The **Set up a connection or network** window appears.
7. Select an option to specify the ad-hoc network settings and click **Next**.
8. Follow the on-screen instructions.

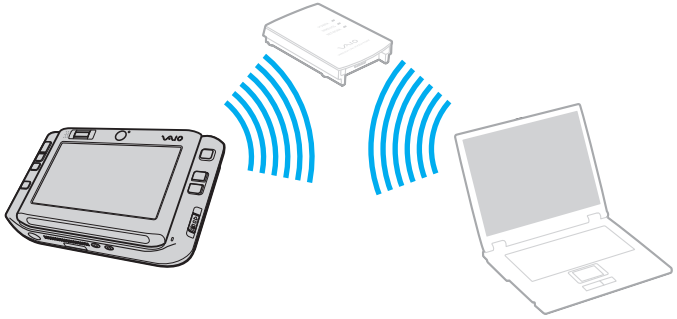
✍
See the online **Specifications** to see whether your model supports the Bluetooth functionality, the IEEE 802.11a/b/g standard, and/or the draft form of the IEEE 802.11n standard.

Communicating with an Access Point (Infrastructure)

An infrastructure network is a network that extends an existing wired local network to wireless devices by providing an access point (not supplied), for example the Sony Access Point. The access point bridges the wireless and wired LAN and acts as a central controller for the wireless LAN. The access point coordinates transmission and reception from multiple wireless devices within a specific range.

The access point will select which channel to use on an infrastructure network.

!
For details on how to select the channel that will be used by the access point, see the manual that came with your access point.



To connect to a wireless network

1 Make sure an access point is set up.
See the manual that came with your access point for more information.

2 Turn on the **WIRELESS** or **WIRELESS LAN** switch.
The Wireless LAN indicator lights up.

3 Double-click (B / LAN) on the taskbar to display the **Wireless Device Switch** window.

4 Select your desired wireless option(s) and click **OK**.

5 Right-click or on the taskbar and select **Connect to a network**.

6 Select the desired access point and click **Connect**.

✍
See the online **Specifications** to see whether your model supports the Bluetooth functionality, the IEEE 802.11a/b/g standard, and/or the draft form of the IEEE 802.11n standard.

Stopping Wireless LAN Communication

To stop wireless LAN communication

Turn off the **WIRELESS** or **WIRELESS LAN** switch.

!
Turning off the wireless LAN functionality while accessing remote documents, files, or resources may result in data loss.

✍
For WPA-PSK or WPA2-PSK authentication, you must enter a passphrase. The passphrase is case sensitive and must be between 8 and 63 alphanumeric characters long or up to 64 characters long using numbers from 0 to 9 and letters from A to F.

Using the Bluetooth Functionality

You can establish wireless communication between your computer and other Bluetooth devices such as another computer or a mobile phone. You can transfer data between these devices without cables and up to 33 feet (10 meters) range in open space.

- Customers in USA
  See the **SmartWi Connection Utility Help** for setting up Bluetooth functionality. For instructions on how to access the **SmartWi Connection Utility Help,** see **Non-printed Documentation** **(page 8)**.
- Customers in other countries or areas
  See the following for setting up Bluetooth functionality.

To start Bluetooth communications

1. Turn on the **WIRELESS** switch.
2. Double-click (/) on the taskbar to display the **Wireless Device Switch** window.
3. Select the **Enable Bluetooth Device** option.
4. Click **OK**.

Notes on using the Bluetooth functionality

- The data transfer rate varies, depending on the following conditions:
  - Obstacles, such as walls, located between devices
  - Distance between devices
  - Material used in walls
  - Proximity to microwaves and cordless telephones
  - Radio frequency interference and other environmental conditions
  - Device configuration
  - Type of software application
  - Type of operating system
  - Use of both wireless LAN and Bluetooth functionalities at the same time on your computer
  - Size of file being exchanged
- Note that due to limitations of the Bluetooth standard, large files may occasionally be corrupted during continuous transfer due to electromagnetic interference in the environment.
- All Bluetooth devices must be certified to make sure that the applicable standard requirements are maintained. Even if standards are met, individual device performance, specifications, and operation procedures can vary. Data exchange may not be possible in all situations.
- As general characteristics of Bluetooth technology, video and audio may go out of synchronization if you play videos on your computer with audio output from the connected Bluetooth device.

- The 2.4 GHz band, with which Bluetooth devices or wireless LAN devices work, is used by various devices. Bluetooth devices use the technology to minimize the interference from other devices that use the same wave length. Simultaneous use of the Bluetooth functionality and wireless communication devices, however, may cause radio interference and result in poorer communication speeds and distances than the standard values.
- The Bluetooth functionality may not work depending on the third party devices or the software version used by third party companies.
- As general characteristics of Bluetooth technology, connecting multiple Bluetooth devices to your computer may cause bandwidth congestion, resulting in poor performance of the devices.

Bluetooth Security

The Bluetooth wireless technology has an authentication function, which allows you to determine with whom you choose to communicate. With the authentication function, you can avoid any anonymous Bluetooth device to access your computer.

The first time two Bluetooth devices communicate, a common passkey (a password required for authentication) should be determined for both devices to be registered. Once a device is registered, there is no need to re-enter the passkey.

The passkey can be different each time, but must be the same at both ends.

For certain devices, such as a mouse, no passkey can be entered.

Communicating with Another Bluetooth Device

You can connect your computer to a Bluetooth device such as another computer, a mobile phone, a PDA, a headset, a mouse, or a digital camera without the use of any cables.

To communicate with another Bluetooth device

To communicate with another Bluetooth device, you need first to set up the Bluetooth functionality. For setting up and using the Bluetooth functionality, see the help file on the Bluetooth utility software.

To see the help file

Right-click the Bluetooth icon on the taskbar and select **Help**.

Stopping Bluetooth Communications

To stop Bluetooth communications

Turn off the **WIRELESS** switch. The Bluetooth indicator turns off.

Using the Bluetooth Headset

The Bluetooth headset (not supplied) will come in handy during a video conference over the Internet using instant messaging software. For details on using the Bluetooth headset, see the manual that came with your Bluetooth headset.

To connect the headset with your computer

1. Press and hold the headset power button for at least five seconds to turn on the Bluetooth headset.
2. Press and hold the volume buttons for at least five seconds until the indicator light blinks in red and green.
3. Right-click the Bluetooth icon on the taskbar and select **Bluetooth Settings**.
   The **Bluetooth Settings** window appears and **Add New Connection Wizard** automatically starts.
4. If the **Add New Connection Wizard** window does not appear, click **New Connection**.
   The **Add New Connection Wizard** window appears.
5. Select **Express Mode (Recommended)** and click **Next**.
   The wizard searches for Bluetooth devices in range and lists available devices, if any.
6. Select the device name for your Bluetooth headset and click **Next**.
   The **Bluetooth Manager-Bluetooth Security** window appears when a connection is established.
7. Enter "0000" for **Bluetooth Passkey (PIN)** and click **OK**.
8. Click **Next**.
   The headset icon appears in the **Bluetooth Settings** window.
9. Right-click the icon and select **Connect**.

To disconnect the headset from your computer

1. Right-click the Bluetooth icon on the taskbar and select **Bluetooth Settings**. The **Bluetooth Settings** window appears.
2. Right-click the headset icon and select **Disconnect**.
3. Click **Yes**.

Using Peripheral Devices

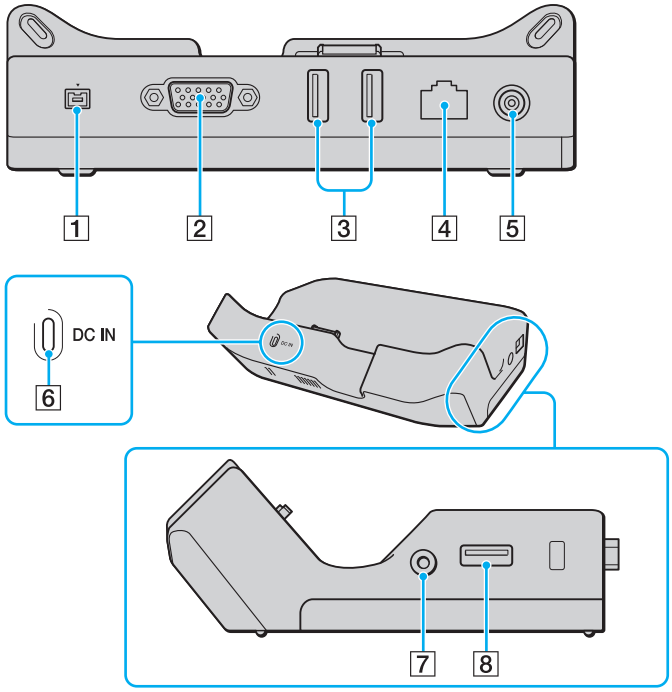
You can add functionality to your VAIO computer by using the various ports on the computer.

❑ **Connecting the Port Replicator (page 68)**
❑ **Connecting the Display/LAN Adapter (page 74)**
❑ **Connecting an Optical Disc Drive (page 75)**
❑ **Connecting External Speakers (page 78)**
❑ **Connecting an External Display (page 79)**
❑ **Selecting Display Modes (page 84)**
❑ **Using the Multiple Monitors Function (page 85)**
❑ **Connecting an External Microphone (page 87)**
❑ **Connecting a Universal Serial Bus (USB) Device (page 88)**
❑ **Connecting a Printer (page 91)**
❑ **Connecting an i.LINK Device (page 92)**
❑ **Connecting to a Network (LAN) (page 93)**

Connecting the Port Replicator

Attaching the supplied port replicator enables you to connect additional peripherals to your computer, such as an i.LINK device and an external display.

Locating Ports on the Port Replicator



1 i.LINK (IEEE 1394) S400 port (page 92)
2 **MONITOR** (VGA) port (page 79)
3 Hi-Speed USB (USB 2.0) ports* (page 88)
4 Network (Ethernet) port (100BASE-TX / 10BASE-T) (page 93)
5 **DC IN** port (page 70)
6 **DC IN** indicator
7 AV Out jack (page 81)
8 Hi-Speed USB (USB 2.0) port* (page 88)

* Support high-/full-/low- speeds.

! The port replicator can be powered only through the AC adapter supplied with your computer. Do not unplug the AC adapter from the port replicator and the AC outlet while using the port replicator; this may cause data damage or hardware malfunctions.

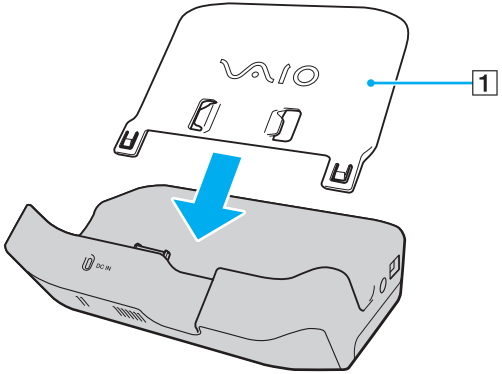
Attaching Your Computer to the Port Replicator

To attach your computer to the port replicator

! To prevent loss of unsaved data, be sure to turn off your computer before attaching it to the port replicator.

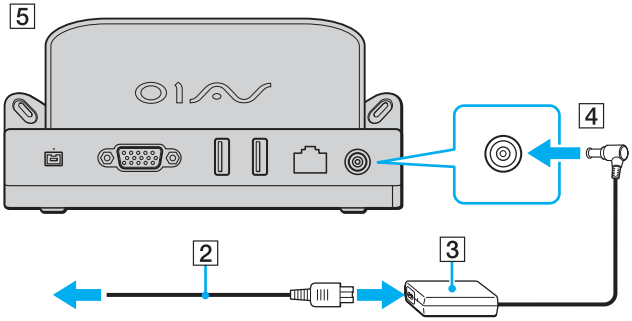
1 Disconnect all peripherals from the computer.

2 Attach the guide holder (1) to the port replicator.

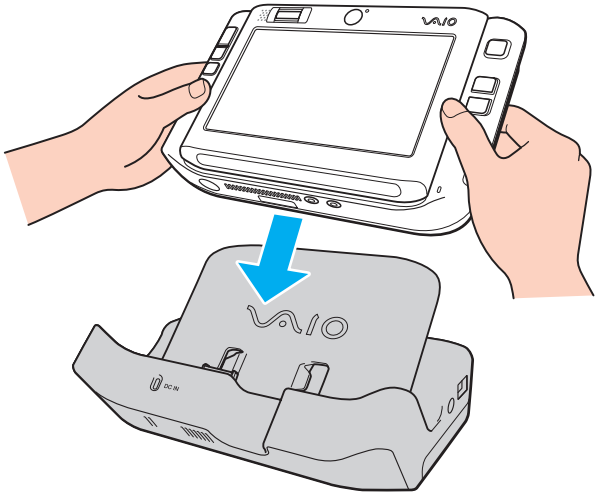


3 Plug one end of the power cord (2) into the AC adapter (3) and the other end into an AC outlet.

4 Plug the cable attached to the AC adapter (3) into the **DC IN** port (4) on the port replicator (5).



5 Slide down the computer along the guide holder until it is fixed on the port replicator.



6 Turn on the computer.

!
Use the AC adapter supplied with your computer.

Keep the battery pack installed on your computer when attaching the computer to the port replicator.

Do not move your computer while attached to the port replicator; this may detach the port replicator and cause damage to the port replicator and the computer.

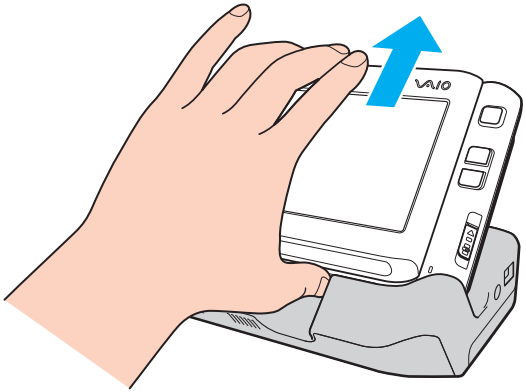
Disconnecting Your Computer from the Port Replicator

! To prevent loss of unsaved data, be sure to turn off your computer before disconnecting it from the port replicator.

To disconnect your computer from the port replicator

1 Turn off the computer and the connected peripherals.

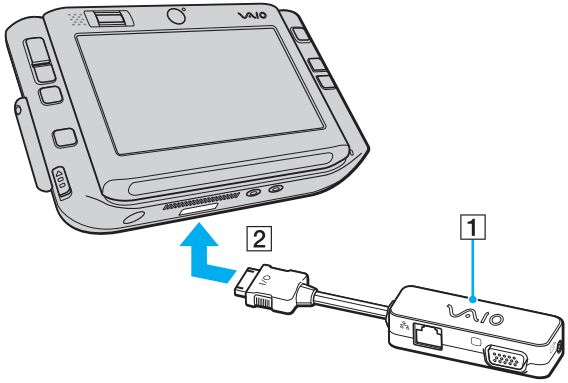
2 Slide the computer up along the guide holder and away from the port replicator.



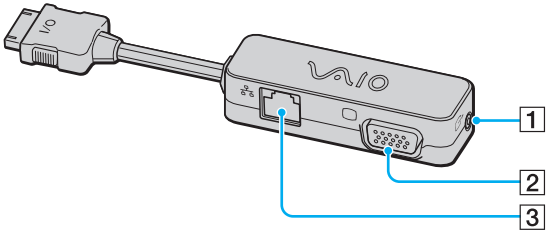
✍ To disconnect the port replicator completely from AC power, unplug the AC adapter.

Connecting the Display/LAN Adapter

Connect the supplied display/LAN adapter (1) to the I/O connector (2) on the bottom of your computer to expand connectivity to the computer.



The display/LAN adapter has the following ports:



1 AV Out jack (page 81)
2 Monitor (VGA) port (page 79)
3 Network (Ethernet) port (100BASE-TX / 10BASE-T) (page 93)

Connecting an Optical Disc Drive

To use optical CDs and DVDs with your computer, you need to connect an external optical disc drive (not supplied) via the port replicator.

Connecting an Optical Disc Drive

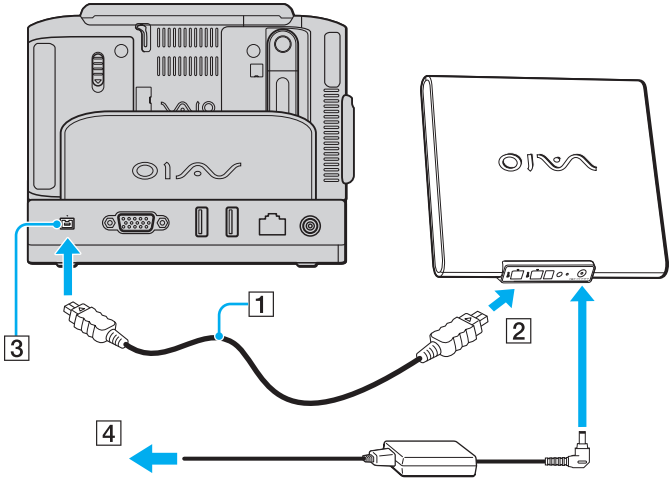
!
Be sure to connect an external optical disc drive before you launch any preinstalled CD/DVD software.

To connect an optical disc drive

1 Attach your computer to the port replicator.
See **Attaching Your Computer to the Port Replicator** **(page 70)**.

2 Plug one end of an i.LINK cable (not supplied) (1) to an external optical disc drive (not supplied) (2), and the other end to the i.LINK port (3) on the back of the port replicator.

3 Connect the external optical disc drive (2) to a AC power source (4) with an AC adapter.
See the manual that came with your external optical disc drive for the detailed instructions on connecting the i.LINK cable and the AC adapter to the drive.



Disconnecting an Optical Disc Drive

You can disconnect an optical disc drive when your computer is on or off. Disconnecting the drive when the computer is in a power saving mode (Sleep or Hibernate) may cause the computer to malfunction.

To disconnect an optical disc drive

✍
To disconnect an optical disc drive when your computer is off, skip steps 1 to 7.

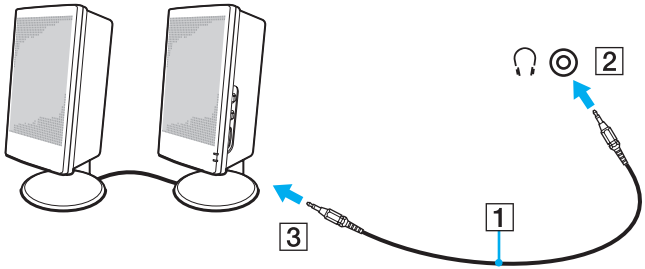
1. Close all software applications accessing the optical disc drive.
2. Double-click the **Safely Remove Hardware** icon on the taskbar.
   The **Safely Remove Hardware** window appears.
3. Select the optical disc drive you want to disconnect.
4. Click **Stop**.
   The **Stop a Hardware device** window appears.
5. Make sure the optical disc drive is selected, and click **OK**.
   A message appears stating it is now safe to remove the hardware device.
6. Click **OK**.
7. Click **Close** to close the **Safely Remove Hardware** window.
8. Disconnect the optical disc drive from the computer.

Connecting External Speakers

You can enhance the sound quality of your computer by connecting external speakers.

To connect external speakers

1. Plug the speaker cable (1) into the headphones jack (2) ∩.
2. Plug the other end of the speaker cable to the external speaker (3).
3. Turn down the volume of the speakers before you turn them on.



✍
Make sure your speakers are designed for computer use.

!
Do not place floppy disks on the speakers; their magnetic field may damage the data on the disks.

Connecting an External Display

You can connect an external display (not supplied) to your computer. For example, you can use the computer with a computer display or a projector.

Connect the power cord after connecting all other cables.

Connected external displays are used as secondary screens.

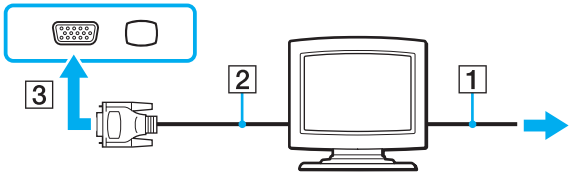
On the Windows operating system, you can also use an external display to set up multiple monitors.

Connecting a Computer Display

You need the supplied port replicator or display/LAN adapter to connect a computer display to your computer.

To connect a computer display

1. If necessary, plug one end of the display's power cord (1) into your display, and the other end into an AC outlet.
2. Plug the display cable (2) (not supplied) into the monitor (VGA) port (3) on the port replicator or on the display/LAN adapter.

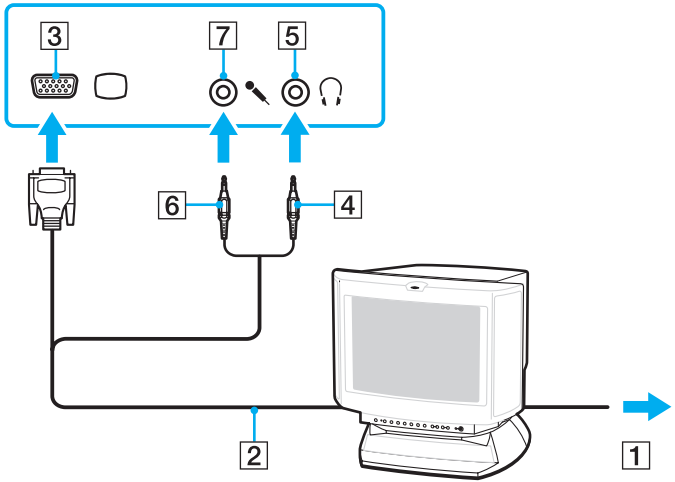


Connecting a Multimedia Computer Display

You need the supplied port replicator or display/LAN adapter to connect a multimedia computer display to your computer.

To connect a multimedia computer display

1. Plug the power cord of your multimedia computer display (1) into an AC outlet.
2. Plug the display cable (2) (not supplied) into the monitor (VGA) port (3) on the port replicator or on the display/LAN adapter.
3. Plug the speaker cable (4) into the headphones jack (5) on the computer.
4. Plug the microphone cable (6) into the microphone jack (7) on the computer.

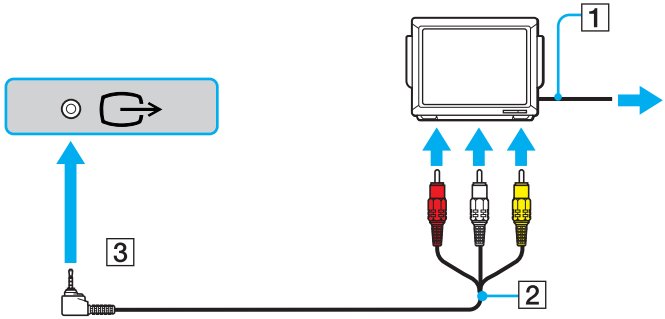


Connecting a TV

You need the supplied port replicator or display/LAN adapter to connect a TV to your computer.

To connect a TV to your computer

1. Plug the power cord of your TV (1) into an AC outlet.
2. Plug one end of an audio/video cable (2) into the AV Out jack (3) ⇨ on the port replicator or on the display/LAN adapter and the other to the TV.
3. Switch the input channel of the TV to external input.
4. Set up the TV configuration system.



✍
You need to use an AV cable that has a minijack connector on one end and 3 RCA (also called cinch) connectors on the other end. If your TV does not have RCA connectors but has a SCART connector, you need an RCA to SCART converter. If your computer has an S VIDEO port, you can use this port as an alternative means of connection.

See the manual that came with your peripheral for more information on installation and use.

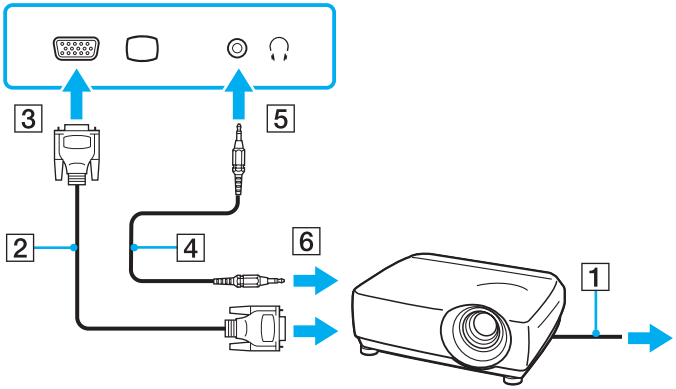
If the display resolution of your computer is more than 1024 x 768 pixels, a part of the image cannot be displayed on your TV. If you want to display the full image, change the display resolution of the computer to 1024 x 768 pixels or lower.

Connecting a Projector

You need the supplied port replicator or display/LAN adapter to connect a projector (for example, the Sony LCD projector) to your computer.

To connect a projector

1. Connect the power cord (1) of your projector into an AC outlet.
2. Plug an RGB signal cable (2) (not supplied) into the monitor (VGA) port (3) on the port replicator or on the display/LAN adapter.
3. Plug an audio cable (4) (not supplied) into the headphones jack (5) on the computer.
4. Plug the RGB signal cable and the audio cable into the jack and port on the projector (6).



Selecting Display Modes

You can select which display to be used as the primary monitor when an external display (desktop monitor, etc.) is connected to your computer.

If you want to work on your computer screen and the external display at the same time, see **Using the Multiple Monitors Function** **(page 85)** for more information.

To select a display

1. Right-click on the desktop and select **Personalize**.
2. Click **Display Settings**.
   The **Display Settings** window appears.
3. Follow the on-screen instructions to change the settings.

✍
You may not be able to display the same contents on your computer screen and the external display or projector at the same time, depending on the type of your external display or projector.

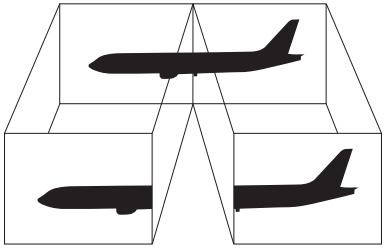
Before turning on your computer, turn on the peripheral devices.

You can alternatively select a display with **VAIO Touch Launcher**. See the help file on the software for more information.

Using the Multiple Monitors Function

The Multiple Monitors function allows you to distribute portions of your desktop across separate displays. For example, if you have an external display connected to the monitor (VGA) port, your computer screen and the external display can function as a single desktop.

You can move the cursor from one display to the other. This allows you to drag objects, such as an open application window or a toolbar, from one display to the other.



Your external display may not support the Multiple Monitors function.

Certain software applications may not be compatible with Multiple Monitors settings.

Make sure that your computer does not enter Sleep or Hibernate mode while you are using Multiple Monitors mode; otherwise the computer may not return to Normal mode.

If you set different colors on each display, do not expand a single window across two displays; otherwise your software may not work properly.

Set fewer colors or a lower resolution for each display.

To select the Multiple Monitors mode

1 Right-click on the desktop and select **Personalize**.

2 Click **Display Settings**.
The **Display Settings** window appears.

3 Follow the on-screen instructions to change the settings.

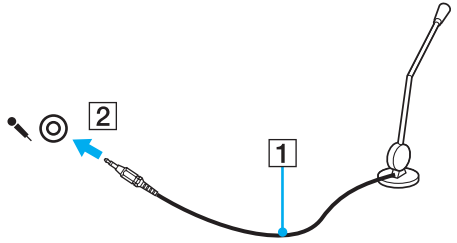
✍
Additionally, you can set the display colors and resolution for each display and customize the Multiple Monitors mode.

Connecting an External Microphone

If you need to use a sound input device (for example, to chat over the Internet), you need to plug in an external microphone (not supplied).

To connect an external microphone

Plug the microphone cable (1) into the microphone jack (2) .



Make sure your microphone is designed for computer use.

Connecting a Universal Serial Bus (USB) Device

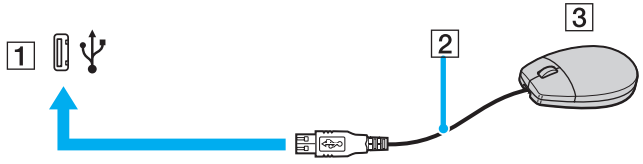
To prevent your computer and/or USB devices from damage, observe the following:

- When moving the computer with USB devices connected, avoid any shock or force to the USB ports.
- Do not put the computer into a bag or carrying case when it has USB devices connected.

Connecting a USB Mouse

To connect a USB mouse

1. Choose the USB port (1) you prefer to use.
2. Plug the USB mouse cable (2) into the USB port.
   You can now use your USB mouse (not supplied) (3).



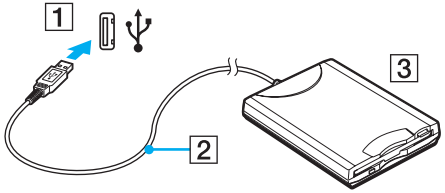
Connecting a USB Floppy Disk Drive

You can purchase a USB floppy disk drive and connect it to your computer.

To connect a USB floppy disk drive

1 Choose the USB port (1) you prefer to use.

2 Plug the USB floppy disk drive cable (2) into the USB port.
Your USB floppy disk drive (3) is now ready for use.



! When using a USB floppy disk drive, do not apply force on the USB port. This may cause a malfunction.

Disconnecting a USB floppy disk drive

You can disconnect a USB floppy disk drive when your computer is on or off. Disconnecting the drive when the computer is in a power saving mode (Sleep or Hibernate) may cause the computer to malfunction.

To disconnect a USB floppy disk drive

✍ To disconnect a USB floppy disk drive when your computer is off, skip steps 1 to 8.

1. Close all programs accessing the floppy disk drive.
2. Double-click the **Safely Remove Hardware** icon on the taskbar.
   The **Safely Remove Hardware** window appears.
3. Select the floppy disk drive you want to unplug.
4. Click **Stop**.
   The **Stop a Hardware device** window appears.
5. Confirm that the floppy disk drive can be safely removed from the system.
6. Click **OK**.
   A message appears stating it is now safe to remove the hardware device.
7. Click **OK**.
8. Click **Close** to close the **Safely Remove Hardware** window.
9. Disconnect the floppy disk drive from the computer.

Connecting a Printer

You can connect a Windows-compatible printer to your computer to print documents.

Connecting a Printer Using the USB Port

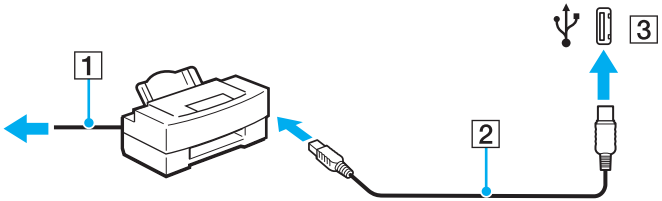
You can connect a USB printer compatible with your version of Windows to the computer.

To connect a printer using the USB port

1 Plug the power cord (1) of your printer into an AC outlet.

2 Choose the USB port (3) you prefer to use.

3 Plug one end of a USB printer cable (2) (not supplied) into the USB port and the other end to your printer.



Connecting an i.LINK Device

Notes on connecting i.LINK devices

- You need the supplied port replicator to connect an i.LINK device, such as a digital video camcorder.
- The i.LINK port on the port replicator does not supply power to external devices generally powered by i.LINK ports.
- The i.LINK port supports transfer rates up to 400 Mbps; however, the actual transfer rate depends on the transfer rate of the external device.
- The optional i.LINK cables may not be available in some countries or areas.
- An i.LINK connection with other compatible devices is not fully guaranteed.
- The i.LINK connection varies depending on the software applications, operating system, and i.LINK-compatible devices you use. See the manual that came with your software for more information.
- Check the working conditions and operating system compatibility of i.LINK-compatible PC peripherals (for example, an HDD or a CD-RW drive) before you connect them to your computer.

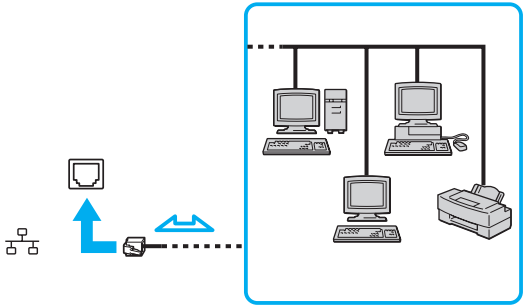
Connecting a Digital Video Camcorder

The connection and video import procedures vary depending on the digital video camcorder and the software that you use.

See the manual that came with your digital video camcorder for the detailed instructions.

Connecting to a Network (LAN)

You need the supplied port replicator or display/LAN adapter to connect your computer to 100BASE-TX/10BASE-T-type networks with an Ethernet network cable. Connect one end of a network cable (not supplied) to the network (Ethernet) port on the port replicator or on the display/LAN adapter and the other end to your network. For detailed settings and devices needed to connect to the network, ask your network administrator.



Your computer can be connected to the network with the default settings.

Telephone lines cannot be connected to the network (LAN) connector on your computer.
If the network (LAN) connector is connected to the telephone lines mentioned below, high electric current to the connector may cause damage, overheating, or fire.

- Home (intercom speakerphone) or business-use telephone lines (multi-line business telephone)
- Public telephone subscriber line
- PBX (private branch exchange)

Do not plug a telephone cable into the network port.

Customizing Your VAIO Computer

This section briefly describes how to change the main settings of your VAIO computer. Among other things, you will learn how to use and customize the look of your Sony software and utilities, etc.

❑ **Setting the Password (page 95)**
❑ **Using Fingerprint Authentication (page 106)**
❑ **Setting Up Your Computer with VAIO Control Center (page 114)**
❑ **Using the Power Saving Modes (page 115)**
❑ **Managing Power with VAIO Power Management (page 119)**

Setting the Password

In addition to the Windows password, you can use BIOS functions to set two types of passwords to protect your computer: power-on password and hard disk password.

Once you have set the power-on password, you will be prompted to enter the password after the VAIO logo appears to start your computer. The power-on password allows you to protect your computer from unauthorized access.

The hard disk password provides additional security for the data stored on your built-in flash memory storage. If you set the hard disk password, other users will not be able to access the data without knowing the password, even if the password-protected flash memory storage is removed from your computer and is installed in another computer.

Adding the Power-on Password

The power-on password is provided to protect your computer from unauthorized access.

There are two types of the power-on password: machine password and user password. The machine password is provided for users with administrator rights on the computer to change all the setup options in the BIOS setup screen, as well as to start the computer. The user password is provided for the standard users to allow for changing some of the BIOS setup options, as well as starting the computer. To set the user password, you must first set the machine password.

!
Once you have set the power-on password, you cannot start your computer without entering the password. Make sure not to forget the password. Write down your password and keep it safe and private from other people.

If you forget the power-on password and need assistance to reset it, a password reset fee will be charged, and your computer may need to be sent in for depot service for password reset.

✍
If you have set the power-on password in conjunction with the fingerprint authentication functionality, you can substitute fingerprint authentication for password entry when turning on your computer. For more information, see **Using Fingerprint Authentication (page 106)**.

To add the power-on password (machine password)

1. Turn on the computer.
2. Press and hold the **Fn** key and press the **F2** key when the VAIO logo appears.
   The BIOS setup screen appears. If not, restart the computer, press and hold the **Fn** key and press **F2** key several times when the VAIO logo appears.
3. Press the ← or → key to select **Security** to display the **Security** tab, select **Set Machine Password**, and then press the **Enter** key.
4. On the password entry screen, enter the password twice and press the **Enter** key.
   The password can be up to 32 alphanumeric characters (including spaces) long.
5. Select **Password when Power On** under **Security**.
   Press the space bar to change the setting from **Disabled** to **Enabled**.
6. Press the ← or → key to select **Exit**, select **Exit Setup**, and then press the **Enter** key.
   At the confirmation prompt, press the **Enter** key.

To add the power-on password (user password)

! Make sure you set the machine password before setting the user password.

1. Turn on the computer.
2. Press and hold the **Fn** key and press the **F2** key when the VAIO logo appears.
   The BIOS setup screen appears. If not, restart the computer, press and hold the **Fn** key and press **F2** key several times when the VAIO logo appears.
3. Enter the machine password and press the **Enter** key.
4. Press the ← or → key to select **Security** to display the **Security** tab, select **Set User Password**, and then press the **Enter** key.
5. On the password entry screen, enter the password twice and press the **Enter** key.
   The password can be up to 32 alphanumeric characters (including spaces) long.
6. Press the ← or → key to select **Exit**, select **Exit Setup**, and then press the **Enter** key.
   At the confirmation prompt, press the **Enter** key.

Changing/Removing the Power-on Password

To change or remove the power-on password (machine password)

1. Turn on the computer.
2. Press and hold the **Fn** key and press the **F2** key when the VAIO logo appears.
   The BIOS setup screen appears. If not, restart the computer, press and hold the **Fn** key and press **F2** key several times when the VAIO logo appears.
3. Enter the machine password and press the **Enter** key.
4. Press the ← or → key to select **Security** to display the **Security** tab, select **Set Machine Password**, and then press the **Enter** key.
5. On the password entry screen, enter the current password once and a new password twice, and then press the **Enter** key.
   To remove the password, leave the **Enter New Password** and **Confirm New Password** fields blank and press the **Enter** key.
6. Press the ← or → key to select **Exit**, select **Exit Setup**, and then press the **Enter** key.
   At the confirmation prompt, press the **Enter** key.

To change or remove the power-on password (user password)

1. Turn on the computer.
2. Press and hold the **Fn** key and press the **F2** key when the VAIO logo appears.
   The BIOS setup screen appears. If not, restart the computer, press and hold the **Fn** key and press **F2** key several times when the VAIO logo appears.
3. Enter the user password and press the **Enter** key.
4. Press the ← or → key to select **Security** to display the **Security** tab, select **Set User Password**, and then press the **Enter** key.
5. On the password entry screen, enter the current password once and a new password twice, and then press the **Enter** key.
   To remove the password, leave the **Enter New Password** and **Confirm New Password** fields blank and press the **Enter** key.
6. Press the ← or → key to select **Exit**, select **Exit Setup**, and then press the **Enter** key.
   At the confirmation prompt, press the **Enter** key.

Adding the Hard Disk Password

The hard disk password provides additional security for the data stored on your built-in flash memory storage. If you enable the hard disk password, this adds an extra level of security.

When adding the hard disk password, you must set both the master and user passwords. The master password is provided for users with administrator rights on the computer to reset the user password in the BIOS setup screen. The user password is provided to lock your built-in flash memory storage. Once you set the user password, you will have to enter the password along with the power-on password (if set), after the VAIO logo appears.

!
You cannot start your computer with the master password.

If you forget the master password or the keyboard fails, which is critical to password entry, no bypass is possible and the data stored on the built-in flash memory storage will not be accessible. There is NO RESET of this password. You will have to replace the built-in flash memory storage at your own expense and lose all the data originally stored on the built-in flash memory storage. Be sure to write down the master password and keep it safe and private from other people.

If you have set the hard disk password in conjunction with the fingerprint authentication functionality, you can substitute fingerprint authentication for password entry when turning on your computer. For more information, see **Using Fingerprint Authentication** **(page 106)**.

To add the hard disk password

1 Turn on the computer.

2 Press and hold the **Fn** key and press the **F2** key when the VAIO logo appears.
The BIOS setup screen appears. If not, restart the computer, press and hold the **Fn** key and press **F2** key several times when the VAIO logo appears.

If you have set the power-on password, enter your power-on password.

3 Press the ← or → key to select **Security** to display the **Security** tab, select **Hard Disk Password**, and then press the **Enter** key.
The password entry screen appears.

4 Select **Enter Master and User Passwords** and press the **Enter** key.

5 Select **Continue** on the warning screen and press the **Enter** key.

6 Enter the master password twice and press the **Enter** key.
The password should be up to 32 alphanumeric characters (including spaces) long.

7 Enter the user password twice and press the **Enter** key.
The password should be up to 32 alphanumeric characters (including spaces) long.

8 At the confirmation prompt, press the **Enter** key.

9 Press either the **Esc** key or the ← or → key to select the **Exit** tab.

10 Press the ↑ or ↓ key to select **Exit Setup** and press the **Enter** key.
At the confirmation prompt, press the **Enter** key.

Changing/Removing the Hard Disk Password

To change the hard disk password

1 Turn on the computer.

2 Press and hold the **Fn** key and press the **F2** key when the VAIO logo appears.
The BIOS setup screen appears. If not, restart the computer, press and hold the **Fn** key and press **F2** key several times when the VAIO logo appears.

If you have set the power-on password, enter your power-on password.

3 Press the ← or → key to select **Security** to display the **Security** tab, select **Hard Disk Password**, and then press the **Enter** key.
The password entry screen appears.

4 Select **Change Master Password** or **Change User Password** and press the **Enter** key.

5 Enter the current password once and then a new password twice.

6 Press the **Enter** key.

7 Press the **Enter** key when the success message appears.

8 Press either the **Esc** key or the ← or → key to select the **Exit** tab.

9 Press the ↑ or ↓ key to select **Exit Setup** and press the **Enter** key.
At the confirmation prompt, press the **Enter** key.

To remove the hard disk password

1. Turn on the computer.
2. Press and hold the **Fn** key and press the **F2** key when the VAIO logo appears.
   The BIOS setup screen appears. If not, restart the computer, press and hold the **Fn** key and press **F2** key several times when the VAIO logo appears.

   If you have set the power-on password, enter your power-on password.
3. Press the ← or → key to select **Security** to display the **Security** tab, select **Hard Disk Password**, and then press the **Enter** key.
   The password entry screen appears.
4. Select **Enter Master and User Passwords** and press the **Enter** key.
5. Enter the current password for **Enter Current Hard Disk Master Password** and press the **Enter** key, leaving everything else blank.
6. Press the **Enter** key when the success message appears.
7. Press either the **Esc** key or the ← or → key to select the **Exit** tab.
8. Press the ↑ or ↓ key to select **Exit Setup** and press the **Enter** key.
   At the confirmation prompt, press the **Enter** key.

Adding the Windows Password

The Windows password comes in handy when you have to share a single computer with other people. By setting the Windows password, you can protect your user account from unauthorized access.

Entry of the Windows password will be prompted after you select your user account.

!
Make sure not to forget the password. Write down your password and keep it safe and private from other people.

✍
If you have set the Windows password in conjunction with the fingerprint authentication functionality, you can substitute fingerprint authentication for password entry when turning on your computer. For more information, see **Using Fingerprint Authentication** **(page 106)**.

To add the Windows password

1. Click **Start** and **Control Panel**.
2. Click **User Accounts and Family Safety** or **User Accounts**.
3. Click **User Accounts**.
4. Click **Create a password for your account** under **Make changes to your account**.
5. In the **New password** and **Confirm new password** fields, enter the password for your account.
6. Click **Create password**.

✍
See **Windows Help and Support** for more information on the Windows password.

Changing/Removing the Windows Password

To change the Windows password

1. Click **Start** and **Control Panel**.
2. Click **User Accounts and Family Safety** or **User Accounts**.
3. Click **User Accounts**.
4. Click **Change your password**.
5. In the **Current password** field, enter your current password.
6. In the **New password** and **Confirm new password** fields, enter a new password.
7. Click **Change password**.

To remove the Windows password

1. Click **Start** and **Control Panel**.
2. Click **User Accounts and Family Safety** or **User Accounts**.
3. Click **User Accounts**.
4. Click **Remove your password**.
5. In the **Current password** field, enter the current password that you want to remove.
6. Click **Remove password**.

Using Fingerprint Authentication

Your computer is equipped with a fingerprint sensor to provide you with additional convenience. A small horizontal bar located at the upper left of the touch panel LCD screen is the sensor of the fingerprint reader and will be referred to as the fingerprint sensor hereinafter.

Once you have registered your fingerprint(s), the fingerprint authentication functionality offers:

- A substitute for password entry
  - Logging onto Windows (page 111)
    If you have enrolled your fingerprints for your user account, you can substitute fingerprint authentication for password entry when logging onto Windows.
  - Power-on Security feature (page 111)
    If you have set the power-on password (page 95) and/or the hard disk password (page 100), you can substitute fingerprint authentication for password entry when starting your computer.
- Password bank for quick Web site access (page 112)
  You can substitute fingerprint authentication for entering information (user accounts, passwords, etc.) required to access the password-protected Web sites.
- File Safe feature to encrypt/decrypt data (page 112)
  With the File Safe feature, you can encrypt files and folder to create an encrypted archive. To decrypt or access such encrypted archives, you can use the fingerprint authentication or enter the password you specified for encryption.
- Application launcher function for quick application access (page 112)
  Once you have assigned an application to your finger, you can then swipe the finger across the fingerprint sensor to launch the assigned application.

Precautions on Using Fingerprint Authentication

- The fingerprint authentication technology does not ensure complete user authentication or complete protection of your data and hardware.
  Sony assumes no liabilities for any problems and damages arising out of your use of or inability to use the fingerprint sensor.
- The fingerprint recognition rate depends on your operating conditions and varies among individuals as well.
- Be sure to make a backup copy of the data stored on the built-in flash memory storage, especially in the encrypted archives created with the File Safe feature, before sending your computer for repair.
  Sony assumes no liabilities for any loss or modification of your data that might have occurred during the course of repair.
- In case the built-in flash memory storage has to be initialized, for example after the repair work, the fingerprint templates will be lost. You will have to enroll them all over again.
- The maintenance and management of data concerning fingerprint authentication must be carried out at your own risk. Sony assumes no liabilities for any defects arising out of your data maintenance and management.
- Before disposing of your computer or transferring it to a third person, it is strongly recommended you erase the fingerprint data enrolled on the fingerprint sensor after erasing the data stored on your built-in flash memory storage. See **Erasing the Enrolled Fingerprints** **(page 113)** for the detailed procedure.

Enrolling a Fingerprint

To use the fingerprint authentication functionality, you must enroll your fingerprint(s) in your computer.

✍
Set the Windows password on your computer before enrollment. See **Adding the Windows Password** **(page 104)** for the detailed instructions.

To enroll a fingerprint

!
Up to 10 fingerprints can be enrolled for each user and up to 21 fingerprints can be enrolled for logging onto your system using the Power-on Security feature. You can also select the finger of which fingerprint you want to use for the Power-on Security feature later.

1 Click **Start**, **All Programs, Protector Suite QL**, and **Control Center**.
The **Fingerprint Control Center** window appears.

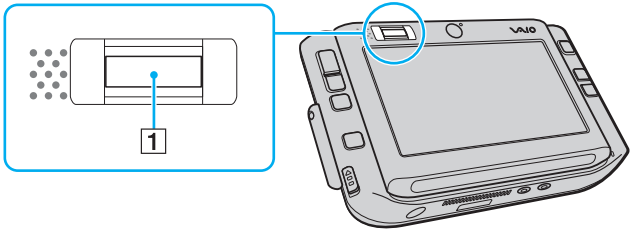
2 Click **Fingerprints** and **Initialize**.

3 Follow the on-screen instructions.

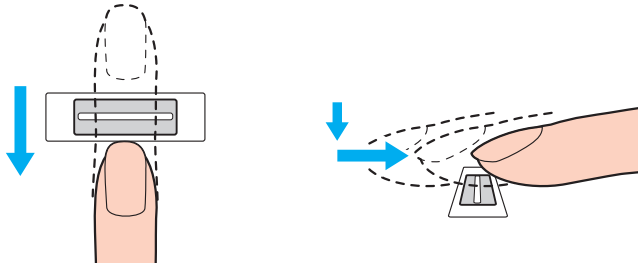
✍
To read the detailed description, open the help file from the **Fingerprint Control Center** window.

If you have failed to enroll a fingerprint, follow these steps to try again.

1 Place the top joint of your finger on the fingerprint sensor (1).



2 Swipe your finger perpendicularly across the fingerprint sensor.



!
Place your fingertip flat in the center of the fingerprint sensor.

Scan your fingerprint from the top joint of the finger to the fingertip.

Keep your finger in contact with the fingerprint sensor while swiping.

Fingerprint enrollment may fail if you move your finger too fast or too slow. Let the fingerprint sensor take about one second to scan your fingerprint.

You may not be able to enroll and/or have your fingerprint(s) recognized if your finger is excessively dry or wet, wrinkled, injured, dirty, etc.

Enroll more than one fingerprint in case of inability to recognize the fingerprint.

Up to 10 fingerprints can be enrolled per person. Note that up to 21 fingerprints can be enrolled for logging onto your system using the Power-on Security feature.

Be sure to clean your fingertip(s) and the fingerprint sensor before swiping in order to keep good recognition performance.

Logging Onto Your System

To use the fingerprint authentication functionality in place of password entry to log onto your system, you need to set the power-on, hard disk, and Windows passwords and configure your computer for fingerprint authentication.

For setting the power-on, hard disk, and Windows passwords, see **Setting the Password (page 95)**.

Logging onto Windows

If you have enrolled your fingerprints for your user account, you can substitute fingerprint authentication for Windows password entry. To log onto Windows, swipe the finger with the enrolled fingerprint across the fingerprint sensor when the Windows log-on screen appears.

For detailed information on logging onto Windows, click **Start**, **All Programs**, **Protector Suite QL**, and **Help** to read the help file.

Power-on Security feature

If you have set the power-on password (page 95) and/or the hard disk password (page 100), you can substitute fingerprint authentication for password entry when starting your computer.

For detailed information on the Power-on Security feature, click **Start**, **All Programs**, **Protector Suite QL**, and **Help** to read the help file.

Using the Password Bank

Once you have registered your user information (user accounts, passwords, etc.) for Web sites in the password bank, you can substitute fingerprint authentication for entering information required to access the password-protected Web sites.

For detailed information on using the password bank, click **Start**, **All Programs**, **Protector Suite QL**, and **Help** to read the help file.

!
You may not be able to use the password bank feature depending on the Web site you access.

Using the File Safe Feature

With the File Safe feature, you can create an encrypted archive to include a file and/or folder for protection against unauthorized access. The encrypted archive can be decrypted or unlocked for included file/folder access by swiping your finger across the fingerprint sensor or entering the backup password you specified for encryption.

For detailed information on using the File Safe feature, click **Start**, **All Programs**, **Protector Suite QL**, and **Help** to read the help file.

Using the Application Launcher

The application launcher feature is available on your computer for launching your preferred application (executable file) that is assigned to one of your fingers with the enrolled fingerprint. Once you have assigned an application to your finger, you can launch the assigned application simply by swiping your finger across the fingerprint sensor.

For detailed information on using the application launcher feature, click **Start**, **All Programs**, **Protector Suite QL**, and **Help** to read the help file.

Erasing the Enrolled Fingerprints

Before disposing of your computer or transferring it to a third person, it is strongly recommended you erase the fingerprint data enrolled on the fingerprint sensor after erasing the data stored on your built-in flash memory storage.

To erase the enrolled fingerprints

1. Turn on the computer.
2. Press and hold the **Fn** key and press the **F2** key when the VAIO logo appears.
   The BIOS setup screen appears. If not, restart the computer, press and hold the **Fn** key, and press **F2** key several times when the VAIO logo appears.
3. Press the ← or → key to select **Security** to display the **Security** tab.
4. Press the ↓ key to select **Clear Fingerprint Data** and press the **Enter** key.
5. At the confirmation prompt, select **Continue** and press the **Enter** key.
   The fingerprint data enrolled on the fingerprint sensor is erased automatically after your system restarts.

Setting Up Your Computer with VAIO Control Center

The **VAIO Control Center** utility allows you to access system information and to specify preferences for system behavior.

To use VAIO Control Center

1. Click **Start**, **All Programs**, and **VAIO Control Center**.
   The **VAIO Control Center** window appears.
2. Select the desired control item and change the settings.
3. Once finished, click **OK**.
   The setting of the desired item has been changed.

✍
For more information about each option, see the help file on **VAIO Control Center**.

Some of the control items will not be visible if you open **VAIO Control Center** as a standard user.

Using the Power Saving Modes

When you use a battery pack as the power source for your computer, you can take advantage of the power management settings to conserve battery life. In addition to the normal operating mode, which allows you to turn off specific devices, your computer has two distinct power saving modes: Sleep and Hibernate. When using battery power, you should be aware that the computer will automatically enter Hibernate mode if the remaining battery charge becomes short, regardless of the power management setting you select.

! If the battery level falls below 10%, you should either connect the AC adapter to recharge the battery pack or shut down your computer and install a fully charged battery pack.

Using Normal Mode

This is the normal state of the computer when it is in use. The green power indicator light is on in this mode. To save power while not working, you can turn off a specific device such as the LCD screen or the hard disk drive.

Using Sleep Mode

Sleep mode turns off the LCD screen and places the storage device(s) and the CPU into a low power consumption mode. The umber power light flashes during this mode.

!
If you do not intend to use your computer for a long period of time while it is disconnected from AC power, place the computer into Hibernate mode or turn it off.

To activate Sleep mode

Click **Start**, the arrow next to the **Lock** button, and **Sleep**.

✍
Your computer comes out of Sleep mode quicker than out of Hibernate mode.

Sleep mode uses more power than Hibernate mode.

!
If the battery runs down while your computer is in Sleep mode, the computer will automatically enter Hibernate mode.

To return to Normal mode

Press any key.

!
If you slide up (in the direction of △ on the switch) and hold the power switch for more than four seconds, your computer will turn off automatically. You will lose all unsaved data.

✍
If the power switch is in the **HOLD** position, you can slide it up (in the direction of △ on the switch) to return to Normal mode.

If the computer is not used for a certain period of time, it will enter Sleep mode. To modify this, you can change the Sleep mode settings.

To change the Sleep mode settings

1. Right-click the power status icon on the taskbar and select **Power Options**.
2. Click **Change plan settings** under the current power plan.
3. Change the time to put the computer to sleep and click **Save Changes**.

Using Hibernate Mode

In Hibernate mode, the state of the system is saved on the built-in flash memory storage and power is turned off. Even when the battery runs down, no data will be lost. The power indicator light is off in this mode.

If you do not intend to use your computer for a long period of time, place the computer into Hibernate mode. This power saving mode saves you the time of shutting down and resuming.

To activate Hibernate mode

Click **Start**, the arrow next to the **Lock** button, and **Hibernate**.

Hibernate mode requires more time than Sleep mode to be activated.

Hibernate mode uses less power than Sleep mode.

Do not move your computer before its power indicator light turns off.

To return to Normal mode

Slide up the power switch (in the direction of △ on the switch).

The computer returns to its normal state.

If you slide up (in the direction of △ on the switch) and hold the power switch for more than four seconds, your computer will turn off automatically.

It takes more time to return to Normal mode from Hibernate mode than from Sleep mode.

Managing Power with VAIO Power Management

Power management helps you set up power schemes for running on AC or battery power to suit your requirements for power consumption.

VAIO Power Management is a software application developed exclusively for VAIO computers. With this software application, you can enhance the Windows power management functions to ensure better operation of your computer and longer battery life. For more information on **VAIO Power Management**, see the help file on the **VAIO Power Management** software.

Selecting a Power Plan

When you start the computer, a power status icon appears on the taskbar. This icon indicates what kind of power source you are using at that time, for example, AC power. Click this icon to display the window that shows your power status.

The **VAIO Power Management** functionality is added to the Windows **Power Options Properties**.

To select a power plan

1. Right-click the power status icon on the taskbar and select **Power Options**.
2. Select your desired power plan.

To change the power plan settings

1. Click **Change plan settings** under your desired power plan in the **Power Options** window.
   Change the Sleep mode and display settings as needed.
2. If you need to change the advanced settings, click **Change advanced power settings** and go to step 3.
   Otherwise, click **Save changes**.
3. Click the **VAIO Power Management** tab.
   Change the settings for each item.
4. Click **OK**.

VAIO Power Management Viewer

To start VAIO Power Management Viewer

Click on the **VAIO Power Management** tab.

Alternatively, you can use **VAIO Control Center** to start **VAIO Power Management Viewer**. Click **Start**, **All Programs**, and **VAIO Control Center**. Double-click **Power Management** in the **VAIO Control Center** window, and then double-click **VAIO Power Management Viewer**.

To change the power scheme

Select the desired power scheme from the drop-down list on **VAIO Power Management Viewer**.

To view performance with the power scheme modified with VAIO Power Management

When both **VAIO Power Management** and **VAIO Power Management Viewer** are running, **VAIO Power Management Viewer** shows performance with the power scheme that was modified with **VAIO Power Management**.

✍
Use **VAIO Power Management** to set up or modify the power scheme.

Precautions

This section describes safety guidelines and precautions to help you protect your VAIO computer from potential damage.

❑ **On Handling the LCD Screen (page 122)**
❑ **On Using the Power Source (page 123)**
❑ **On Handling Your Computer (page 124)**
❑ **On Using the Built-in MOTION EYE Camera (page 126)**
❑ **On Handling Floppy Disks (page 127)**
❑ **On Handling Discs (page 128)**
❑ **On Using the Battery Pack (page 129)**
❑ **On Using Headphones (page 131)**
❑ **On Handling Memory Stick Media (page 132)**
❑ **On Using the Folding Stand (page 133)**
❑ **On Using the Adapter Holding Band (page 135)**
❑ **On Using the Wrist Strap (page 136)**
❑ **On Replacing the Multi-pointer Cap (page 137)**
❑ **On Updating Your Computer (page 138)**

On Handling the LCD Screen

- Do not leave the LCD screen facing the sun. This could damage the LCD screen. Be careful when using your computer near a window.
- Do not scratch the surface of the LCD screen or exert pressure on it. This could cause a malfunction.
- Using your computer in low temperature conditions may produce a residual image on the LCD screen. This is not a malfunction. When the computer returns to normal temperature, the screen returns to normal.
- A residual image may appear on the LCD screen if the same image is displayed for a long period of time. The residual image disappears in a while. You can use a screen saver to prevent residual images.
- The LCD screen becomes warm during operation. This is normal and does not indicate a malfunction.
- The LCD screen is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD screen. This is a normal result of the manufacturing process and does not indicate a malfunction.
- Avoid rubbing the LCD screen. This could damage the screen. Use a soft, dry cloth to wipe the surface of the LCD screen.
- Do not change the LCD screen orientation setting in the **Tablet PC Settings** window even when there are change options available for selection, as it may make your computer unstable. Sony assumes no liabilities for any defects arising out of making the change.

On Using the Power Source

- See the online **Specifications** to check the power operation of your model.
- Do not share the AC outlet with other power-consuming equipment, such as a photocopier or a shredder.
- You can purchase a power strip with a surge protector. This device helps prevent damage to your computer caused by sudden power surges, in an electrical storm, for example.
- Do not place heavy objects on the power cord.
- To disconnect the cord, pull it out by holding the plug. Never pull the cord itself.
- Unplug your computer from the AC outlet if you are not planning to use the computer for a long period of time.
- Make sure that the AC outlet is easily accessible.
- When the AC adapter is not used, unplug it from the AC outlet.
- Use the AC adapter supplied with your computer or genuine Sony products. Do not use any other AC adapter as it may cause a malfunction.

On Handling Your Computer

- Clean the cabinet with a soft cloth, which is dry or lightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent such as alcohol or benzine, as these may damage the finish of your computer.
- If you drop a solid object or any liquid onto your computer, shut down the computer and then unplug it. You may want to have the computer checked by qualified personnel before operating it again.
- Do not drop your computer or place any objects on top of the computer.
- Do not place your computer in a location subject to:
  - Heat sources, such as radiators or air ducts
  - Direct sunlight
  - Excessive dust
  - Moisture or rain
  - Mechanical vibration or shock
  - Strong magnets or speakers that are not magnetically shielded
  - Ambient temperature of more than 95°F (35°C) or less than 41°F (5°C)
  - High humidity
- Do not place electronic equipment near your computer. The electromagnetic field of the computer may cause a malfunction.
- Provide adequate air circulation to prevent internal overheating. Do not place your computer on porous surfaces such as rugs or blankets, or near material such as curtains or draperies that may block its air vents.
- Your computer uses high-frequency radio signals and may cause interference to radio or TV reception. If this occurs, relocate the computer a suitable distance away from the set.

- To ensure compliance with the FCC RF exposure requirements, use only Sony supplied accessories for body worn operation which provides a distance to the body of at least 1 cm.
- Use only specified peripheral equipment and interface cables; otherwise, problems may occur.
- Do not use cut or damaged connection cables.
- If your computer is brought directly from a cold location to a warm one, moisture may condense inside the computer. In this case, allow at least one hour before turning on the computer. If any problems occur, unplug the computer and contact an authorized Sony Service Center. To find the nearest center or agent, see **Sony Support Information** **(page 180)**.
- Make sure you disconnect the power cord before cleaning your computer.
- To avoid losing data if your computer is damaged, back up your data regularly.
- Be sure to put your computer into the supplied protective pouch before you carry the computer.
  - The supplied protective pouch is not shock-resistant. It is intended to protect your computer from scratches.
  - Hold your computer with the LCD screen facing upwards and insert the computer into the supplied protective pouch from its left side.
  - The supplied protective pouch is not water-resistant. Be sure to wipe water off the case right away if it gets wet.
  - Do not use any solvents, such as benzine or thinner, to clean the supplied protective pouch.

On Using the Built-in MOTION EYE Camera

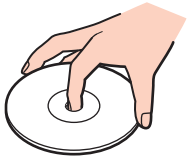
- Do not let the direct sunlight get into the scope of the built-in **MOTION EYE** camera regardless of your computer's power state, as it may cause a malfunction of the camera.
- The built-in **MOTION EYE** camera is disabled while videos or still images are imported from an i.LINK-compatible device connected to the i.LINK port.

On Handling Floppy Disks

- Do not open the shutter manually or touch the surface of the floppy disk.
- Keep floppy disks away from magnets.
- Keep floppy disks away from direct sunlight and other sources of heat.
- Keep floppy disks away from any liquid. Do not let them get wet. When you are not using your floppy disk, always remove it from the floppy disk drive and use a storage case.
- If the floppy disk comes with an adhesive label, make sure that the label is properly affixed. If the edge of the label is curled up, the label may stick to the inside of the floppy disk drive and cause a malfunction or damage your floppy disk.

On Handling Discs

- Do not touch the surface of the disc.
- Do not drop or bend the disc.
- Fingerprints and dust on the surface of a disc may cause read errors. Always hold the disc by its edges and central hole, as shown below:



- Proper care of the disc is essential to its continuous reliability. Do not use solvents (such as benzine, thinner, alcohol, commercially available cleaners, or anti-static spray) which may cause damage to the disc.
- For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center out.
- If the disc is badly soiled, moisten a soft cloth with water, wring it out well, and use it to wipe the surface of the disc from the center out. Wipe off any remaining moisture with a dry soft cloth.
- Never affix an adhesive label to a disc. This will affect the use of the disc irreparably.

On Using the Battery Pack

- Do not leave battery packs in temperatures above 140°F (60°C), such as in a car parked in the sun or under direct sunlight.
- Battery life is shorter in a cold environment. This is due to decreased battery efficiency at low temperatures.
- Charge battery packs at temperatures between 50°F to 86°F (10°C to 30°C). Lower temperatures require longer charging time.
- Do not charge the battery pack in any way other than as described in this user guide or as designated by Sony in writing.
- For your safety, Sony recommends using the genuine Sony battery pack and AC adapter that are provided with this product. If either of these items need to be replaced during the life of the product, be sure to use a compatible genuine Sony battery pack or AC adapter. Information about compatible models can be found at the following URLs:
  http://www.sony.com/vaio for customers in USA and Canada
  http://www.sony.net/ for customers in Latin American countries or areas
- Sony disclaims and shall assume no responsibility in case of any losses and damages arising from:
  - the use of non-genuine Sony battery packs or AC adapters with your VAIO computer.
  - the disassembly or alteration of, or tampering with, any Sony battery pack.
- While the battery pack is in use or being charged, heat builds up in the battery pack. This is normal and is not cause for concern.
- Keep the battery pack away from all sources of heat.
- Keep the battery pack dry.
- Do not open or try to disassemble the battery pack.
- Do not expose the battery pack to any mechanical shock.
- If you are not using your computer for a long period of time, remove the battery pack from the computer to prevent damage to the battery pack.

- If, after fully charging the battery pack, the battery power is still low, the battery pack may be reaching the end of its life and should be replaced.
- You do not need to discharge the battery pack before recharging.
- If you have not used the battery pack for a considerable amount of time, recharge the battery pack.

On Using Headphones

- **Road safety** – Do not use headphones while driving, cycling, or operating any motorized vehicle. It may create a traffic hazard and is illegal in some areas. It can also be potentially dangerous to play loud music while walking, especially at pedestrian crossings.
- **Preventing hearing damage** – Avoid using headphones at high volume. Hearing experts advise against continuous, loud and extended play. If you experience a ringing in your ears, reduce the volume or discontinue use.

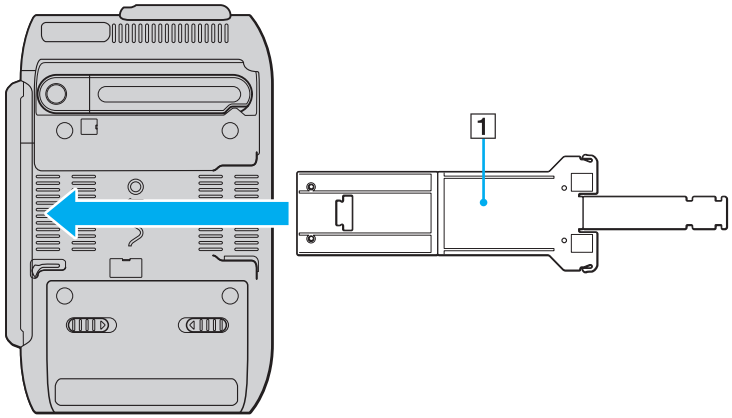
On Handling Memory Stick Media

- Do not touch the Memory Stick media connector with your finger or metallic objects.
- Use only the adhesive label supplied with the Memory Stick media as a label.
- Do not bend, drop, or apply strong shock to the Memory Stick media.
- Do not disassemble or modify Memory Stick media.
- Do not let Memory Stick media get wet.
- Do not use or store Memory Stick media in a location subject to:
  - Static electricity
  - Electrical noise
  - Extremely high temperatures, such as in a car parked in the sun
  - Direct sunlight
  - High humidity
  - Corrosive substances
- Use the storage case supplied with the Memory Stick media.
- Be sure to make a backup copy of your valuable data.
- Keep the Memory Stick media and Memory Stick Adaptors out of reach of children. There is a risk of swallowing them.
- When using the Memory Stick Duo media, do not use a fine-tipped pen to write on the label adhered to the Memory Stick Duo media. Exerting pressure on the media may damage internal components.

On Using the Folding Stand

The portable folding stand, which is supplied with your computer for use in the prop-up position, is not robust in terms of materials. Do not exert pressure on the stand when setting it up. To set up the stand, follow these steps:

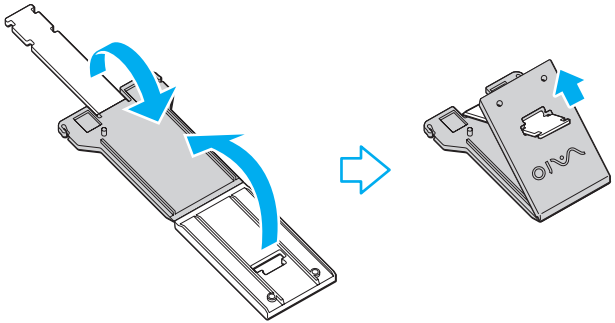
1 Attach the folding stand (1) along with the guides on the back of your computer.



!
Insert the folding stand so that its VAIO logo surface comes in contact with the back of your computer.

2 Fold both ends of the stand inwards.

3 Insert the narrower end into the slit on the other and pull it up until it clicks into place.

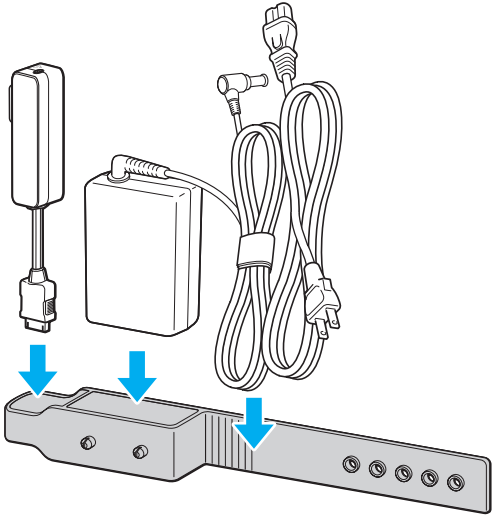


There are two pairs of notches on the narrower end of the folding stand so that you can adjust the position of your computer at two angles.

On Using the Adapter Holding Band

An adapter holding band is supplied with your computer for bundling the display/LAN adapter, the AC adapter, and the power cord together when you are not using them with your computer.

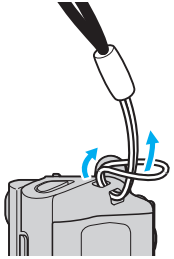
❑ Make sure to put them in proper place as shown below:



❑ Make sure to insert the display/LAN adapter from its I/O connector end until the adapter fits into place.

On Using the Wrist Strap

❑ To prevent accidental dropping, make sure to fasten the supplied wrist strap to your computer through one of the strap holes and wear it when you use the computer on your palms.

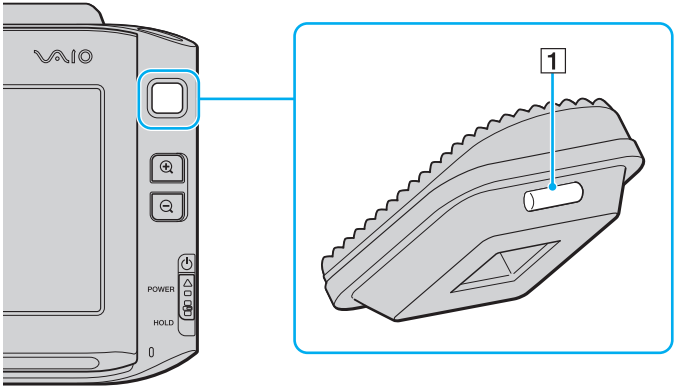


❑ Do not grasp the wrist strap to carry your computer around as it may cause the computer to hit against something, resulting in damage to the computer.

On Replacing the Multi-pointer Cap

The cap at the tip of the multi-pointer is a consumable. When it wears out, replace it with one of the two supplied spare caps.

- ❏ Make sure to put the spare cap firmly in place.
- ❏ Make sure that the side with a small projection (1) of the spare cap faces upwards when putting it.



On Updating Your Computer

Confirm that the latest updates have been installed on your computer using the following software applications so that the computer can run more efficiently.

To confirm that they have been installed on the computer, follow these steps for each software application:

- **Windows Update**
  Click **Start**, **All Programs**, and **Windows Update** and then follow the on-screen instructions.
- **VAIO Update 3**
  Click **Start**, **All Programs**, **VAIO Update 3**, and **VAIO Update Options** and then follow the on-screen instructions.

If you have not yet installed the latest updates, install them with the above software. To download and install the updates on the computer, the computer must be connected to the Internet. For information on how to connect the computer to the Internet, see **Using the Internet** **(page 50)**.

Troubleshooting

This section describes how to solve common problems you might encounter when using your VAIO computer. Many problems have simple solutions. Try these suggestions before visiting the Sony online support Web site at the following URLs:
http://esupport.sony.com/EN/VAIO/ for customers in USA
http://www.sony.ca/support for customers in Canada
http://esupport.sony.com/ES/VAIO/ for customers in Spanish speaking Latin American countries or areas
http://esupport.sony.com/ES/VAIO/BR/ for customers in Brazil

- **Computer (page 141)**
- **System Security (page 150)**
- **Battery (page 151)**
- **Built-in MOTION EYE Camera (page 153)**
- **Networking (page 156)**
- **Bluetooth Technology (page 159)**
- **Optical Discs (page 163)**
- **Display (page 164)**
- **Printing (page 170)**
- **Microphone (page 171)**
- **Speakers (page 172)**
- **Pointing Device (page 173)**
- **Keyboard (page 175)**
- **Floppy Disks (page 176)**
- **Audio/Video (page 177)**

- **Memory Stick Media** (page 178)
- **Peripherals** (page 179)

Computer

What should I do if my computer does not start?

- ❑ Make sure your computer is securely plugged into a power source and turned on. Make sure the power indicator shows the power is on.
- ❑ Make sure the battery pack is installed properly and charged.
- ❑ Make sure the floppy disk drive (if applicable) is empty.
- ❑ If your computer is plugged into a power strip or an uninterruptible power supply (UPS), make sure the power strip or UPS is plugged into a power source and turned on.
- ❑ If you are using an external display, make sure it is plugged into a power source and turned on. Make sure the brightness and contrast controls are adjusted correctly. See the manual that came with your display for more information.
- ❑ Disconnect the AC adapter and remove the battery pack. Wait three to five minutes. Reinstall the battery pack, reconnect the AC adapter, and then slide up the power switch (in the direction of △ on the switch) to turn on your computer.
- ❑ Condensation may cause your computer to malfunction. If this occurs, do not use the computer for at least one hour.
- ❑ Check that you are using the supplied Sony AC adapter. For your safety, use only the genuine Sony rechargeable battery pack and AC adapter, which are supplied by Sony for your VAIO computer.

What should I do if a BIOS error appears when I turn on my computer?

If the message "Press <F1> to resume, <F2> to setup" appears at the bottom of the screen, follow these steps:

1. Press and hold the **Fn** key and press the **F2** key.
   The BIOS setup screen appears. If not, restart the computer, press and hold the **Fn** key and press **F2** key several times when the VAIO logo appears.
2. Set the date (month/day/year). Press the **Enter** key.
3. Press the ↓ key to select **System Time**, and then set the time (hour: minute: second). Press the **Enter** key.
4. Press the → key to select the **Exit** tab, and then press and hold the **Fn** key and press the **F9** key.
   At the confirmation prompt, press the **Enter** key.
5. Select **Exit Setup**, and press the **Enter** key.
   At the confirmation prompt, press the **Enter** key.
   Your computer restarts.

If this occurs frequently, contact an authorized Sony Service Center. To find the nearest center or agent, see **Sony Support Information** **(page 180)**.

What should I do if the power indicator (Green) lights but my screen remains blank?

Follow these steps:

1. Slide up (in the direction of △ on the switch) and hold the power switch for more than four seconds to check that the power indicator goes out. Then turn on your computer again.
2. If your computer screen still remains blank, unplug the AC adapter, remove the battery pack, and leave the computer for about a minute. Then reinstall the battery pack, plug in the AC adapter, and turn on the computer again.

What should I do if my computer or software stops responding?

- If your computer stops responding while a software application is running, press the **Alt**+**Fn**+**F4** keys to close the application window.
- If the **Alt**+**Fn**+**F4** keys do not work, click **Start**, the arrow next to the **Lock** button, and **Shut Down** to turn off your computer.
- If your computer does not turn off, press the **Ctrl**+**Alt**+**Delete** keys and click the arrow next to the **Shut down** button and **Shut Down**.
  If the **Windows Security** window appears, click **Shut Down**.

  !
  Turning off your computer with the **Ctrl**+**Alt**+**Delete** keys or the power switch may cause loss of unsaved data.
- If your computer still does not turn off, slide up (in the direction of △ on the switch) and hold the power switch until the computer turns off.
- Remove the AC adapter and battery pack.
- Try reinstalling the software.
- Contact the software publisher or designated provider for technical support.

Why doesn't my computer enter Sleep or Hibernate mode?

Your computer may become unstable if the operating mode is changed before the computer completely enters Sleep or Hibernate mode.

To restore your computer to normal operating stability

1. Close all open programs.
2. Click **Start**, the arrow next to the **Lock** button, and **Restart**.
3. If your computer does not restart, press the **Ctrl**+**Alt**+**Delete** keys and click the arrow next to the **Shut down** button and **Restart**.
4. If this procedure does not work, slide up (in the direction of △ on the switch) and hold the power switch until the computer turns off.

   !
   Turning off your computer with the power switch may cause loss of unsaved data.

What should I do if the battery indicator is flashing and my computer does not start?

- This issue could be due to the battery pack not being installed properly. To resolve this issue, turn off your computer and remove the battery pack. Then install the battery pack to the computer again. For details, see **Installing the Battery Pack (page 27)**.
- If the issue persists after performing the above, it means the installed battery pack is not compatible. Remove the battery pack and contact an authorized Sony Service Center. To find the nearest center or agent, see **Sony Support Information (page 180)**.

What should I do if a message window, notifying of incompatibility or improper installation of the battery pack, appears and my computer enters Hibernate mode?

- This issue could be due to the battery pack not being installed properly. To resolve this issue, turn off your computer and remove the battery pack. Then install the battery pack to the computer again. For details, see **Installing the Battery Pack (page 27)**.
- If the issue persists after performing the above, it means the installed battery pack is not compatible. Remove the battery pack and contact an authorized Sony Service Center. To find the nearest center or agent, see **Sony Support Information (page 180)**.

Why does the System Properties window display a slower CPU speed than the maximum?

This is normal. Because your computer's CPU utilizes a type of CPU speed controlling technology for power conservation purposes, System Properties may display the CPU's current speed instead of the maximum speed.

What should I do if Windows does not start, showing a message, when I start my computer?

If you enter a wrong power-on password three times consecutively, the **Enter Onetime Password** message appears. If you enter a wrong power-on password three times consecutively again, the **System Disabled** message appears and Windows will not start. Slide up (in the direction of △ on the switch) and hold the power switch for more than four seconds to check that the power indicator goes off. Wait for 10 or 15 seconds, then restart your computer and enter the correct password. When entering the password, check that the Num lock indicator and Caps lock indicator are off. If any are lit, press and hold the **Fn** key and press the **Num Lk** key or simply press the **Caps Lock** key to turn off the indicator before entering the password.

What should I do if my game software does not work or it keeps crashing?

- Check the Web site of the game if there are any patches or updates to download.
- Make sure you have installed the latest video driver.
- On some VAIO models, the graphics memory is shared with the system. The optimal graphic performance in this case is not guaranteed.

What should I do if I cannot remember the BIOS password?

If you have forgotten the BIOS password, contact an authorized Sony Service Center to reset it. A reset fee will be charged. To find the nearest center or agent, see **Sony Support Information** **(page 180)**.

Why does it take time before my computer starts?

If Norton Internet Security's Personal Firewall is active, it may take some time before the desktop screen appears due to network security checkups.

Why doesn't my screen turn off when the time selected for the automatic turn-off action has passed?

The **VAIO Original Screen Saver** disables the timer setting, which you can select using the Windows power options, for your screen to turn off.
Select the screen saver other than the **VAIO Original Screen Saver**.

What should I do if I cannot boot my computer from the external device connected to the computer?

To boot your computer from the external device, for example the USB floppy disk drive and the USB/i.LINK optical disc drive, you need to change the boot device.

Turn on your computer, press and hold the **Fn** key and press the **F11** key when the VAIO logo appears.

How do I reduce the volume of the recovery partition?

Your built-in flash memory storage contains the recovery partition where data for the system recovery is stored. To reduce the volume of the recovery partition, follow these steps:

1. Insert the recovery disc into an external optical disc drive (not supplied) while your computer is on, turn off the computer, and then turn it on once again.
2. Press and hold the **Fn** key and press the **F11** key when the VAIO logo appears during the startup process.
   The **System Recovery Options** window appears.

   !
   Use the recovery disc you created upon delivery of your computer.
3. Select your keyboard layout from the drop-down list and click **Next**.
4. Select your operating system and click **Next**.
5. Click **VAIO Recovery Center**.
   The **VAIO Recovery Center** window appears.
6. Click **Restore Complete System** and **Start**.
7. Select **Skip** and click **Next**.
   You will be prompted to select whether or not to keep the VAIO Value-added contents.
8. Select **No** and click **Next**.
9. Follow the on-screen instructions.

   !
   The above procedure involves system recovery. Note that the applications and data you added on the built-in flash memory storage before reducing the volume of the recovery partition will all be lost.

   Once you have reduced the volume of the recovery partition, you need the recovery disc for later system recovery.

How do I check the volume of the recovery partition?

Your built-in flash memory storage contains the recovery partition where data for the system recovery is stored. To check the volume of the recovery partition, follow these steps:

1. Click **Start**, right-click **Computer**, and select **Manage**.
   The **Computer Management** window appears.
2. Click **Disk Management** under **Storage** on the left pane.
   The volume of the recovery partition and the total volume of the C drive are displayed in the **Disk 0** row on the center pane.

System Security

How can I protect my computer against security threats, such as viruses?

The Microsoft Windows operating system is preinstalled on your computer. The best way to protect your computer against security threats, such as viruses, is to download and install the latest Windows updates regularly.

You can get important Windows updates by doing the following:

! Your computer must be connected to the Internet before you can receive updates.

1. Connect to the Internet.
2. Double-click the **Windows Security Alerts** icon on the taskbar.
3. Follow the on-screen instructions to set up automatic or scheduled updates.

How do I keep my antivirus software updated?

You can keep the **Norton Internet Security** software program current with the latest updates from Symantec Corporation.

To download and install the latest security update

1. Click **Start**, **All Programs**, **Norton Internet Security**, and **Norton Internet Security.**
2. Click the item to update the software on the left pane.
3. Follow the on-screen instructions to select and download updates.

Battery

How do I find the battery charging status?

See **Charging the Battery Pack (page 28)**.

When is my computer using AC power?

When your computer is directly connected to the AC adapter, it uses AC power, even if the battery pack is installed.

When should I recharge the battery pack?

- When the battery level falls below 10%.
- When both the battery and power indicators blink.
- When you have not used the battery pack for a long period of time.

When should I replace the battery pack?

If the battery power is still low after charging it, the battery pack may be reaching the end of its life and should be replaced.

Should I be concerned that the installed battery pack is warm?

No, it is normal for the battery pack to be warm when it is powering your computer.

Can my computer enter Hibernate mode while using battery power?

Your computer can enter Hibernate mode while using battery power, but some software programs and peripheral devices prevent the system from entering Hibernate mode. If you are using a program that prevents the system from entering Hibernate mode, save your data frequently to avoid losing data. See **Using Hibernate Mode** **(page 118)** for information on how you can manually activate Hibernate mode.

Built-in MOTION EYE Camera

Why does the viewer window show no images or poor-quality images?

- The built-in **MOTION EYE** camera cannot be shared by more than one software application. If another software application is using the camera, exit the application before using the built-in **MOTION EYE** camera.
- The video memory of your computer may have become insufficient for displaying images from the built-in **MOTION EYE** camera. Lowering the resolution or reducing the colors of the LCD screen might help.
- The viewer window may show some noise, for example horizontal streaks, if you view a rapid-moving object. This is normal and does not indicate a malfunction.
- If the problem persists, restart your computer.

Why are captured images poor in quality?

- The images captured under the fluorescent lamp may show reflection of the light.
- A dark portion in captured images may appear as a noise.

Why do captured images contain dropped frames and audio interruptions?

- The effect settings on your software application may have caused dropped frames. See the help file on your software application for more information.
- There may be more software applications running than your computer can handle. Exit the applications that you are not currently using.
- The power management function of your computer may have been activated. Check the CPU performance.

Why does movie playback show dropped frames when my computer is running on the battery?

The battery pack is running out of power. Connect your computer to an AC power source.

Why do the images captured by the built-in MOTION EYE camera flicker?

This problem occurs when you use the camera under fluorescent lights due to the mismatch between lighting output frequency and shutter speed.
To reduce flicker noise, change the placement angle of your computer or the brightness of camera images. In some software applications, you can set an appropriate value to one of the camera properties (e.g. **LightSource**, **Flickness**, etc.) to eliminate flicker noise.

Why is the video input from the built-in MOTION EYE camera suspended for a few seconds?

The video input may be suspended for a few seconds if the CPU load increases.

This is normal and does not indicate a malfunction.

Why can't I use the built-in MOTION EYE camera?

- The built-in **MOTION EYE** camera cannot be shared by more than one software application. If another software application is using the camera, exit the application before using the built-in **MOTION EYE** camera.
- You cannot use the built-in **MOTION EYE** camera if the screen view is rotated. Restore the standard screen view.
- If the problem persists, you must reinstall the driver software for the camera. Follow these steps:
  1. Click **Start**, **Control Panel**, **Hardware and Sound**, and **Device Manager**.
  2. Double-click **Imaging devices**.
  3. Right-click the device name for your camera and click **Update Driver Software**.

What should I do if my computer becomes unstable when it enters a power saving mode while the built-in MOTION EYE camera is in use?

- Do not place your computer into Sleep or Hibernate mode while you are using the built-in **MOTION EYE** camera.
- If your computer automatically enters Sleep or Hibernate mode, change the corresponding power saving mode setting. For changing the setting, see **Using the Power Saving Modes** **(page 115)**.

Networking

What should I do if my computer cannot connect to a wireless LAN access point?

- Connection availability is affected by distance and obstructions. You may need to move your computer away from obstructions or closer to any access point you may be using.
- Make sure the **WIRELESS** or **WIRELESS LAN** switch is on and the Wireless LAN indicator is lit on your computer.
- Make sure power to the access point is on.
- Follow these steps to check the settings:
  1. Click **Start** and **Control Panel**.
  2. Click **View network status and tasks** under **Network and Internet**.
  3. Click **Connect to a network** to confirm that your access point is selected.
- Make sure the encryption key is correct.
- Make sure **Maximum Performance** is selected for **Wireless Adapter Settings** in the **Power Options** window. Selecting any other option may result in a communication failure. To change the settings, follow these steps:
  1. Right-click the power status icon on the taskbar and select **Power Options**.
  2. Click **Change plan settings** under the current power plan.
  3. Click **Change advanced power settings**.
     The **Power Options** window appears.
  4. Select the **Advanced settings** tab.
  5. Double-click **Wireless Adapter Settings** and **Power Saving Mode**.
  6. Select **Maximum Performance** from the drop-down list both for **On battery** and **Plugged in**.

What should I do if I cannot access the Internet?

- Check the access point settings. See the manual that came with your access point for more information.
- Make sure your computer and the access point are connected to one another.
- Move your computer away from obstructions or closer to any access point you may be using.
- Make sure your computer is properly configured for Internet access.
- Make sure **Maximum Performance** is selected for **Wireless Adapter Settings** in the **Power Options** window. Selecting any other option may result in a communication failure. Follow the steps in **What should I do if my computer cannot connect to a wireless LAN access point?** **(page 156)** to change the settings.

Why is the data transfer speed slow?

- The wireless LAN data transfer speed is affected by distance and obstructions between devices and access points. Other factors include device configurations, radio conditions, and software compatibility. To maximize the data transfer speed, move your computer away from obstructions or closer to any access point you may be using.
- If you are using a wireless LAN access point, the device may be temporarily overloaded depending on how many other devices are communicating via the access point.
- If your access point interferes with other access points, change the access point channel. See the manual that came with your access point for more information.
- Make sure **Maximum Performance** is selected for **Wireless Adapter Settings** in the **Power Options** window. Selecting any other option may result in a communication failure. Follow the steps in **What should I do if my computer cannot connect to a wireless LAN access point?** **(page 156)** to change the settings.

How do I avoid data transfer interruptions?

- When your computer is connected to an access point, data transfer interruptions may occur when using large files or if the computer is in close proximity to microwaves and cordless telephones.
- Move your computer closer to the access point.
- Make sure the access point connection is intact.
- Change the access point channel. See the manual that came with your access point for more information.
- Make sure **Maximum Performance** is selected for **Wireless Adapter Settings** in the **Power Options** window. Selecting any other option may result in a communication failure. Follow the steps in **What should I do if my computer cannot connect to a wireless LAN access point?** **(page 156)** to change the settings.

What are channels?

- Wireless LAN communication occurs on divided frequency bands known as channels. Third-party wireless LAN access point channels may be preset to different channels from Sony devices.
- If you are using a wireless LAN access point, see connectivity information contained in the manual that came with your access point.

Why does the network connection stop when I change the encryption key?

Two computers with the wireless LAN functionality may lose a peer-to-peer network connection if the encryption key is changed. You can either change the encryption key back to the original profile or re-enter the key on both computers so the key matches.

Bluetooth Technology

What should I do if other Bluetooth devices cannot discover my computer?

- Make sure both devices have the Bluetooth functionality enabled.
- If the Bluetooth indicator is off, turn on the **WIRELESS** switch.
- You cannot use the Bluetooth functionality when your computer is in a power saving mode. Return to Normal mode, then turn on the **WIRELESS** switch.
- Your computer and the device may be too far apart. Wireless Bluetooth technology works best when the devices are within 33 feet (10 meters) of each other.

Why can't my computer discover other Bluetooth devices?

If the connected device is also connected to other devices, it may not appear in the Bluetooth utility software or you may not be able to communicate with the device.

What should I do if I cannot find the Bluetooth device with which I want to communicate?

- Check that the Bluetooth functionality of the device with which you want to communicate is on. See the other device's manual for more information.
- If the device with which you want to communicate is already communicating with another Bluetooth device, it may not be found or it may not be able to communicate with your computer.
- To allow other Bluetooth devices to communicate with your computer, right-click the Bluetooth icon on the taskbar and select **Options** to open the **Options** window. Then, check if proper security modes are selected on the **Security** tab. For details on the security modes, see the help file on the Bluetooth utility software.
  See **Communicating with Another Bluetooth Device (page 63)** for more information.

What should I do if other Bluetooth devices cannot connect to my computer?

- Make sure the other device is authenticated.
- Your computer may not allow connections from other devices. To enable Bluetooth device connections, follow these steps:

  1. Right-click the Bluetooth icon on the taskbar and select **Options**.
     The **Options** window appears.
  2. Check if **Standard** or **Low** is selected for the Bluetooth security level on the **Security** tab.
     If a custom Bluetooth security level is selected, click the **Default level** button.
  3. Click **OK**.

- The data transfer distance can be shorter than 33 feet (10 meters) depending on existing obstacles between the two devices, on radio wave quality, and on the operating system or the software in use. Move your computer and Bluetooth devices closer to each other.
- If the device with which you want to communicate is already communicating with another Bluetooth device, it may not be found or it may not be able to communicate with your computer.
- Check that the Bluetooth functionality of the device with which you want to communicate is on. See the other device's manual for more information.

Why is my Bluetooth connection slow?

- The data transfer speed depends on the obstacles and/or the distance between the two devices, on the radio wave quality, and on the operating system or the software in use. Move your computer and Bluetooth devices closer to each other.
- The 2.4 GHz radio frequency used by Bluetooth and wireless LAN devices is also used by other devices. Bluetooth devices incorporate technology that minimizes interference from other devices using the same wavelength, however, communication speed and connection range may be reduced. Interference from other devices may also stop communication altogether.
- Connection availability is affected by distance and obstructions. You may need to move your computer away from obstructions or closer to the device to which it is connected.
- Identify and remove obstacles between your computer and the device to which it is connected.
- Note that due to limitations of the Bluetooth standard, large files may occasionally be corrupted during continuous transfer due to electromagnetic interference in the environment.

What should I do if my computer becomes unstable when I use a Bluetooth audio device?

Your computer may become unstable if you change a sound output device to a Bluetooth audio device while audio or video playback software is running.

When you listen to playback audio from your Bluetooth audio device, connect the Bluetooth audio device to the computer first and then launch your audio or video playback software.
See the help file for detailed information on connecting the Bluetooth audio device.

Why can't I connect to service supported by the target Bluetooth device?

Connection is only possible for services also supported by the computer with the Bluetooth functionality. For more details, see the help file on the Bluetooth utility software.

Can I use a device with Bluetooth technology on airplanes?

With Bluetooth technology, your computer transmits a radio frequency of 2.4 GHz. Sensitive locations, such as hospitals and airplanes, may have restrictions on use of Bluetooth devices, due to radio interference. Check with facility staff to see if use of the Bluetooth functionality on the computer is permitted.

Why can't I connect to a Bluetooth device by specifying its IP address on a Personal Area Network (PAN)?

The Bluetooth utility software uses Dynamic Host Configuration Protocol (DHCP) to assign IP addresses to active wireless devices. If you specify a fixed IP address for the device to which you want to connect, the utility cannot assign a dynamic IP address to the device and fails. Do not specify IP addresses when using a PAN.

Why can't I use the Bluetooth functionality when I log onto my computer as a user with a standard user account?

The Bluetooth functionality may not be available to a user with a standard user account on your computer. Log onto the computer as a user with administrator rights.

Why can't I connect to a Bluetooth device in Personal Area Network User mode?

If the device to which you want to connect supports Bluetooth communication in Personal Area Network User mode only, you cannot establish a connection from your computer.

Why can't I use the Bluetooth utility software when I switch a user?

If you switch a user without logging off your system, the Bluetooth utility software will not work successfully. Be sure to log off before switching a user. To log off your system, click **Start**, the arrow next to the **Lock** button, and **Log Off**.

Optical Discs

What should I do if I cannot write data to CD media?

- Make sure you neither launch any software application nor allow any to launch automatically, not even a screen saver.
- Stop using the keyboard.
- If you are using a CD-R/RW disc with an adhesive label affixed, replace it with one with no affixed adhesive label. Using a disc with an affixed adhesive label could cause a write error or other damage.

What should I do if I cannot write data to DVD media?

- Make sure you are using the correct DVD recordable media.
- Check which DVD recordable format is compatible with your external optical disc drive. Note the possibility that some brands of DVD recordable media do not work.

Display

Why did my screen go blank?

- Your computer screen may go blank if the computer loses power or enters a power saving mode (Sleep or Hibernate). If the computer is in LCD (Video) Sleep mode, press any key to bring the computer back into Normal mode. See **Using the Power Saving Modes** **(page 115)** for more information.
- The power switch may be in the **HOLD** position. Slide up the power switch (in the direction of △ on the switch) to release the switch.
- Make sure your computer is securely plugged into a power source and turned on. Make sure the power indicator shows the power is on.
- If your computer is using battery power, make sure the battery pack is installed properly and is charged. See **Using the Battery Pack** **(page 27)** for more information.
- If the display mode is set to the external display, select on **VAIO Touch Launcher**.

Why can't I view the whole screen image of a DVD video on my TV screen?

The screen resolution may not be properly set. We recommend that you adjust the screen resolution to 1024 x 768 or smaller, depending on the size of your external display screen.

How do I adjust the image on my TV screen?

Use the controls on your external display to adjust the image. See the manual that came with your TV for more information.

How do I change the screen resolution on my TV screen?

- Your TV screen may not show the whole screen image of a video if the screen resolution is set larger than 1024 x 768. Adjust the screen resolution to 1024 x 768 or smaller.
- If you are using the AV Out jack, plug the audio-video (AV) cable into your computer before you start it.

  To change the screen resolution, follow these steps:

  1. Right-click the desktop and select **Personalize**.
  2. Click **Display Settings**.
     The **Display Settings** window appears.
  3. Move the slider under **Resolution** to the left to reduce or to the right to increase the screen resolution.

How do I switch the display output from my screen to TV?

See **Selecting Display Modes (page 84)**.

Alternatively, you can use **VAIO Touch Launcher** to switch the display output. See the help file on the software for more information.

Why doesn't my screen display a video?

- If the external display is selected for the display output and the external display is disconnected, you cannot display a video on your computer screen. Stop video playback, change the display output to the computer screen, and then restart video playback. See **Selecting Display Modes** **(page 84)** for changing the display output. Alternatively, you can use **VAIO Touch Launcher** to change the display output. See the help file on the software for more information.
- The video memory of your computer may be insufficient for displaying high resolution videos. In this case, lower the resolution of the LCD screen.

  To change the screen resolution, follow these steps:

  1. Right-click the desktop and select **Personalize**.
  2. Click **Display Settings**.
     The **Display Settings** window appears.
  3. Move the slider under **Resolution** to the left to reduce or to the right to increase the screen resolution.

  ✍
  You can confirm the value of the total available graphics memory and video memory. Right-click on the desktop, select **Personalize**, and click **Display Settings**, **Advanced Settings**, and the **Adaptor** tab. The value may be displayed differently from the actual memory on your computer.

What should I do if my screen is dark?

Use **VAIO Touch Launcher** to brighten your computer screen. See the help file on the software for more information.

What should I do if the LCD brightness of my screen changes?

The LCD brightness setting, adjusted with **VAIO Touch Launcher**, is temporary and may be restored to the original setting when your computer returns to Normal mode from Sleep or Hibernate mode. To save your preference for the brightness, follow these steps:

1. Right-click the power status icon on the taskbar and select **Power Options**.
2. Click **Change plan settings** under the current power plan.
3. Click **Change advanced power settings**.
   The **Power Options** window appears.
4. Select the **Advanced settings** tab.
5. Double-click **Display**.
6. Adjust the LCD brightness setting in the item for brightness adjustment.

Why can't I use my touch panel?

- The power switch may be in the **HOLD** position. Slide up the power switch (in the direction of △ on the switch) to release the switch.
- The touch panel may be disabled.
  Use **VAIO Control Center** to enable the touch panel. See **Setting Up Your Computer with VAIO Control Center** **(page 114)** and find out more in its help file.

Why can't I rotate my screen view with the rotate button on VAIO Touch Launcher?

- The color quality of the LCD screen may not be appropriate.

  To rotate the screen view, you must select **Medium (16 bit)** or **Highest (32 bit)** for **Colors** on the **Monitor** tab on the **Display Settings** window. To change the color quality, follow these steps:

  1. Click **Start** and **Control Panel**.
  2. Click **Adjust screen resolution** under **Appearance and Personalization**.
  3. Select appropriate color quality from the **Colors** drop-down list.

- Some software may not support the rotated screen view. Use your computer in the horizontal orientation to use such software.

What should I do if the external display remains blank?

If you cannot change the display output with **VAIO Touch Launcher**, you need to change the settings for the external display with **VAIO Control Center**. To change the settings, launch the **VAIO Control Center**, select the control item for the external display, and then click to select the check box for changing the options to detect the external display. Then, try **VAIO Touch Launcher** to change the display output.

How do I run Windows Aero?

! This Q & A entry applies to selected models only.

To run Windows Aero, follow these steps:

1. Click **Start** and **Control Panel**.
2. Click **Customize colors** under **Appearance and Personalization**.
3. Click **Open classic appearance properties for more color options**.
   The **Appearance Settings** window appears.
4. Select **Windows Aero** from the **Color scheme** options on the **Appearance** tab.
5. Click **OK**.

For information about the Windows Aero features, such as Windows Flip 3D, see **Windows Help and Support**.

Printing

What should I do if I cannot print a document?

- Make sure your printer is on, and the printer cable is securely connected to the ports on the printer and computer.
- Make sure your printer is compatible with the Windows operating system installed on your computer.
- You may need to install the printer driver software before you use your printer. See the manual that came with your printer for more information.
- If your printer is not functioning after your computer resumes from a power saving mode (Sleep or Hibernate), then restart the computer.
- If the bidirectional communication functions are provided with your printer, disabling the functions on your computer may enable printing. Follow these steps:

  1 Click **Start** and **Control Panel**.

  2 Click **Printer** under **Hardware and Sound**.

  3 Right-click the printer icon and select **Properties**.

  4 Click the **Ports** tab.

  5 Click to cancel the **Enable bidirectional support** check box.

  6 Click **OK**.

  This change to the settings disables the bidirectional communication functions of the printer, such as data transfer, status monitoring, and remote panel.

  When your printer is connected to the port replicator, check the port replicator to see if it is connected to an AC power source.

Microphone

What should I do if my microphone does not work?

If you are using an external microphone, make sure the microphone is turned on and is properly plugged into the microphone jack on your computer.

How can I prevent microphone feedback?

Microphone feedback occurs when the microphone receives the sound from a sound output device, such as a speaker.

To prevent this problem:

- ❑ Keep the microphone away from a sound output device.
- ❑ Turn down the volume of the speakers and the microphone.

Speakers

What should I do if my external speakers do not work?

- If you are using a program that has its own volume control, make sure the volume control is properly set. See the program's help file for more information.
- Make sure your speakers are properly connected and the volume is turned up loud enough to hear sound.
- Make sure your speakers are designed for computer use.
- If your speakers have a muting button, set the button to off.
- The speaker volume may have been turned off by **VAIO Touch Launcher**. Check the software for volume control.
- If your speakers require external power, make sure the speakers are connected to a power source. See the manual that came with your speakers for more information.
- Check the Windows volume controls by clicking the volume icon on the taskbar.

What should I do if I do not hear sound from the built-in speakers?

- If you are using a program that has its own volume control, make sure the volume control is properly set. See the program's help file for more information.
- Make sure the speaker volume is turned up loud enough and the audio option is enabled.
- The speaker volume may have been turned off by **VAIO Touch Launcher**. Check the software for volume control.
- Check the Windows volume controls by clicking the volume icon on the taskbar.

Pointing Device

What should I do if my pointing device does not work?

- Check if the power switch is in the **HOLD** position. If so, slide up the power switch (in the direction of △ on the switch) to release the switch.
- You may have disabled the pointing device without connecting a mouse to your computer.
- Make sure that a mouse is not connected to your computer.
- If the pointer does not move while a software application is running, press the **Alt**+**Fn**+**F4** keys to close the application window.
- If the **Alt**+**Fn**+**F4** keys do not work, click **Start**, the arrow next to the **Lock** button, and **Restart** to restart your computer.
- If your computer does not restart, press the **Ctrl**+**Alt**+**Delete** keys and click the arrow next to the **Shut down** button and **Restart**.
  If the **Windows Security** window appears, click **Restart**.
- If this procedure does not work, slide up (in the direction of △ on the switch) and hold the power switch until the computer turns off.

  !
  Turning off your computer with the power switch may cause loss of unsaved data.

How do I perform pen operations, such as a pen flick?

Use touch commands. See **Using Touch Commands** **(page 35)** for more information.

How do I calibrate the touch panel?

Follow these steps to calibrate the touch panel:

1 Click **Start**, **All Programs**, **Touch Panel**, and **Calibration**.

2 Follow the on-screen instructions.

What should I do if I cannot show the hidden taskbar with the stylus?

Touch panel calibration may make a gap between the pointer position and the point of the screen you have actually touched with the stylus. Therefore, you may not be able to move the pointer to the edge of the screen to show the hidden taskbar if you specify the setting to hide the taskbar automatically.
In this case, click **Start**, **All Programs**, **Touch Panel**, and **Calibration** to display the screen for calibration and tap a little above each red cross when tapping the two that appear on the bottom of the screen.

Keyboard

What should I do if the keyboard configuration is wrong?

The language layout of your computer's keyboard is labeled on the packaging box. If you choose a different regional keyboard when you complete the Windows setup, the key configuration will be mismatched.
To change the keyboard configuration, follow these steps:

1. Click **Start** and **Control Panel**.
2. Click **Clock, Language, and Region**, and click **Regional and Language Options**.
3. Change the settings as desired.

What should I do if I cannot enter certain characters with the keyboard?

If you cannot enter **U**, **I**, **O**, **P**, **J**, **K**, **L**, **M**, and so on, the **Num Lk** key may be activated. Check that the Num lock indicator is off. If the Num lock indicator is on, press and hold the **Fn** key and press the **Num Lk** key to turn it off before entering these characters.

Floppy Disks

Why doesn't the Safely Remove Hardware icon appear on the taskbar when the drive is connected?

Your computer does not recognize the floppy disk drive. First, make sure the USB cable is properly connected to the USB port. If you need to secure the connection, wait a few moments for the computer to recognize the drive. If the icon still does not appear, follow these steps:

1. Close all programs that are accessing the floppy disk drive.
2. Wait for the LED indicator on the floppy disk drive to turn off.
3. Push the eject button to remove the disk, and disconnect the USB floppy disk drive from your computer.
4. Reconnect the floppy disk drive by inserting the USB connector into the USB port.
5. Restart the computer by clicking **Start**, the arrow next to the **Lock** button, and **Restart**.

What should I do if I cannot write data to a floppy disk?

- Make sure the floppy disk is properly inserted in the drive.
- If the disk is inserted properly and you are still unable to write data to it, the disk may be full or write-protected. You can either use a floppy disk that is not write-protected or disable the write-protect feature.

Audio/Video

What should I do if I cannot use my DV camcorder?

If it is prompted that the i.LINK device seems to be disconnected or turned off, the i.LINK cable may not be securely plugged into the port on your computer or camcorder. Unplug the cable, and plug it in once again. See **Connecting an i.LINK Device (page 92)** for more information.

✍ i.LINK is a trademark of Sony used only to designate that a product contains an IEEE 1394 connection. The procedure to establish an i.LINK connection may vary, depending on a software application, an operating system, and a compatible i.LINK device. Not all products with an i.LINK connection can communicate with each other. See the manual that came with your compatible i.LINK device for more information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as a CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

How do I turn off the Windows startup sound?

To turn off the Windows startup sound, follow these steps:

1. Click **Start** and **Control Panel**.
2. Click **Hardware and Sound**.
3. Click **Manage audio devices** under **Sound**.
4. On the **Sounds** tab, click to cancel the **Play Windows Startup sound** check box.
5. Click **OK**.

Memory Stick Media

What should I do if I cannot use Memory Stick media, which were formatted on a VAIO computer, on other devices?

You may need to reformat your Memory Stick media.

Formatting Memory Stick media erases all data, including music data previously saved on it. Before you reformat Memory Stick media, back up important data and confirm that the media does not contain files you want to keep.

1 Copy the data from the Memory Stick media onto your built-in flash memory storage to save data or images.

2 Format the Memory Stick media by following the steps in **To format a Memory Stick media** **(page 47)**.

Why can't I save music files onto my Memory Stick media?

Copyright protected music cannot be checked out to any Memory Stick media other than those with the MagicGate logo.

!
Use of recorded music requires permission from the copyright holders.

Sony is not responsible for music files that cannot be recorded from a CD or downloaded from other sources.

Can I copy images from a digital camera using Memory Stick media?

Yes, and you can view video clips that you have recorded with Memory Stick media-compatible digital cameras.

Why can't I write data to Memory Stick media?

Some versions of Memory Stick media are equipped with an erasure prevention switch to protect data from accidental erasure or overwriting. Make sure the erasure prevention switch is off.

Peripherals

What should I do if I cannot connect a USB device?

- If applicable, check the USB device is turned on and using its own power supply. For example, if you are using a digital camera, check if the battery is charged. If you are using a printer, check if the power cable is connected properly to the AC outlet.
- Try using one of the USB ports on the port replicator. The driver could be installed to the specific port you used the first time you connected the device.
- See the manual that came with your USB device for more information. You may need to install software before you connect the device.
- Try connecting a simple, low-powered device such as a mouse to test if the port is working at all.
- USB hubs may prevent a device from working because of the distribution of power. We recommend you connect the device directly to your computer without a hub.

Support Options

This section contains information on where to go for answers to questions about your VAIO computer and the preinstalled software.

Sony Support Information

See the following sources for answers in the sequence listed below.

1 VAIO Computer Documentation

This on-screen **User Guide** (this manual) and the printed **Welcome mat** provide information on how to maximize your computer's capabilities and solve common problems.

2 Program Guides and Help Files

The preinstalled programs on your computer may be supplied with individual help guides. These guides are stored on the built-in flash memory storage as on-screen help files. You can find the help files from the help menu under the specific program.

3 Operating System Online Support

Your computer comes preinstalled with a Microsoft Windows operating system. For operating system support, you can visit Microsoft customer support at: http://support.microsoft.com/directory/.

4 Sony Computing Support

This service provides instant access to information on commonly encountered problems. Type a description of the problem and the Knowledge Database searches for the corresponding solutions online.
You can visit the Sony online support Web site at the following URLs:
http://esupport.sony.com/EN/VAIO/ for customers in USA
http://www.sony.ca/support for customers in Canada
http://esupport.sony.com/ES/VAIO/ for customers in Spanish speaking Latin American countries or areas
http://esupport.sony.com/ES/VAIO/BR/ for customers in Brazil

5 VAIO Update

When your computer is connected to the Internet, **VAIO Update** automatically notifies you when critical software and security information is posted on the support Web site. Click the **VAIO Update** notice to open the VAIO Support Web site and view the information.

For customers in Latin American countries or areas

Customer Information Center

If you do not find the information you are looking for at our site, you may call Sony directly. In order to receive the fastest and most efficient services, have the following information readily available:

1. Your VAIO computer model

   You can find it at the lower right corner of the display on the notebook, and in the same place on the front panel of the CPU on the desktop.

2. Your computer's serial number

   You can find it on the back or bottom of the notebook or on the back of the desktop; the serial number is the last 7 digits of the number below the barcode.

3. The operating system on your computer
4. The hardware component or the software program that is causing you the problem
5. A brief description of the problem

In order to contact a Sony technical support representative, call the following numbers:

❑ In Argentina:

(011) 6770-SONY (7669)

❑ In Mexico:

In Mexico City: 5002-9819

In the Mexican Republic: 01-800-759-7669

❑ In Colombia:

01-800-550-7000

❑ In Peru:

0-801-1-7000 or 511-6100

❑ In Chile:

800-261-800

From cellular phones: 02-754-6333

❑ In Venezuela:

0-800-1-SONY-00 (0-800-1-7669-00)

❑ In Panama:

800-2050

❑ In Brazil:

(11) 3677-1080

Program Support Information

Depending on the computer model and particular configuration you purchased, your computer may not include all of the software programs listed below.

Contacts for Sony software products are listed below:

- For customers in USA
  Web site http://esupport.sony.com/EN/VAIO/
  Telephone 888-4-SONY-PC (888-476-6972)
- For customers in Canada
  Web site http://www.sony.ca/support
  Telephone 888-4-SONY-PC (888-476-6972)
- For customers in Spanish speaking Latin American countries or areas
  Web site http://esupport.sony.com/ES/VAIO/
- For customers in Brazil
  Web site http://esupport.sony.com/ES/VAIO/BR/

For contacts about third-party software products, see the following.

Adobe® Photoshop® Elements, Premiere® Elements, Reader®

Adobe Systems Inc.

- For customers in USA and Canada
  Web site http://www.adobe.com/support
  Telephone 800-685-3652

America Online® (Dial-Up)

America Online, Inc.

- For customers in USA and Canada
  Web site http://www.aol.com

AOL® Toolbar

America Online, Inc.

- For customers in USA and Canada
  Web site http://help.aol.com/help

AOL® Instant Messenger™

America Online, Inc.

- For customers in USA and Canada
  Web site http://www.aim.com

Bluetooth™ Utility

TOSHIBA Corporation

For contacts about the software, see **Program Support Information** **(page 184)**.

Bluetooth™ Utility

Broadcom Corporation

For contacts about the software, see **Program Support Information** **(page 184)**.

Click to DVD® software

Sony Electronics Inc.

At the touch of a button, Click to DVD software allows you to automatically burn DVDs from a digital video (DV) device. Create DVDs by capturing video content straight from a DV device or by importing video from stored files — and you can also edit the video. Create DVD photo albums and slide shows with picture files or by importing pictures from a digital still camera. You can give a professional look to your DVDs by adding chapter menus, backgrounds, and menu screens. You are only a few clicks away from creating your own DVDs!
For contacts about the software, see **Program Support Information** **(page 184)**.

DVgate Plus™ software

Sony Electronics Inc.

Connect a compatible digital video camera to your computer's i.LINK port and capture video clips and still images. Edit clips from your video, add new clips, and combine clips into new movie segments. Save your movies back to your digital video camera or in a variety of popular file formats.
For contacts about the software, see **Program Support Information** **(page 184)**.

InstantOn

InterVideo, Inc.

❑ For customers in USA and Canada
Web site http://www.intervideo.com/jsp/Support.jsp

Intel® PROSet/Wireless Software

Intel Corporation

❑ For customers in USA and Canada
Web site http://support.intel.com

LocationFree Player

Sony Electronics Inc.

For contacts about the software, see **Program Support Information** **(page 184)**.

Microsoft® Office Basic Edition, Office Professional Edition, Office Small Business Edition, Office Ready, Office Ultimate

Microsoft Corp.

❑ For customers in USA and Canada
Web site http://support.microsoft.com

60-Day Trial Version of Microsoft® Office

!
The Microsoft Office 60-Day Trial software included with this computer system is intended for evaluation purposes only. The software has been installed and you must activate the software before you can use it. Product activation procedures will be detailed during initial launch of the software; activation requires Internet access. This software has an expiration date of 60 days from the date of first use, at which time the software will operate under reduced-functionality mode, limiting end-user options and operations.

Microsoft Corp.

- For customers in USA and Canada
  Web site http://support.microsoft.com

Microsoft® Internet Explorer, Movie Maker, Media Player, Works

Microsoft Corp.

- For customers in USA and Canada
  Web site http://support.microsoft.com

Microsoft® Streets & Trips

Microsoft Corp.

A comprehensive trip planning software.

- For customers in USA and Canada
  Web site http://support.microsoft.com

14-Day Trial Version of Napster®

Napster, Inc.

- For customers in USA and Canada
  Web site http://www.napster.com

Norton 360™ All in One Security

Symantec Corporation

- For customers in USA and Canada
  Web site http://www.symantec.com/techsupp

Protector Suite QL

Sony Electronics Inc.

Protector Suite QL Edition allows you to easily setup your fingerprint sensor equipped on your computer. Protector Suite QL supports fingerprint logon, fast user switching, file encryption, registering forms and more.
For contacts about the software, see **Program Support Information** **(page 184)**.

QuickBooks Free Starter Edition

Intuit Inc.

- For customers in USA and Canada
  Web site http://www.intuit.com/support/

QuickBooks Deluxe

Intuit Inc.

❑ For customers in USA and Canada
Web site http://www.intuit.com/support/

Roxio® Easy Media Creator® 9 Suite

Sonic Solutions

❑ For customers in USA and Canada
Web site http://support.sonic.com/

SafeIT-Digital Document Shredder

SafeIT Security Ltd.

❑ For customers in USA and Canada
Web site http://www.safeit.com/support

SmartWi™ Connection Utility

Sony Electronics Inc.

SmartWi Connection Utility allows you to easily switch between the various wireless components (Wireless LAN, Wireless WAN, and Bluetooth™ technology connectivity) that came with your computer.
For contacts about the software, see **Program Support Information** **(page 184)**.

SonicStage Mastering Studio™ software

Sony Electronics Inc.

Use SonicStage Mastering Studio software to record songs from analog records or cassette tapes into your computer and output them to CDs, DVDs, or audio files in WAV format.
For contacts about the software, see **Program Support Information** **(page 184)**.

VAIO® Camera Capture Utility

Sony Electronics Inc.

VAIO Camera Capture Utility is provided for capturing still images and movies with the external camera connected to a USB port or an i.LINK® port on your computer or with the built-in **MOTION EYE**® camera on your computer.
For contacts about the software, see **Program Support Information** **(page 184)**.

VAIO® Camera Utility

Sony Electronics Inc.

VAIO Camera Utility provides you with various video quality settings when using the internal camera.
For contacts about the software, see **Program Support Information** **(page 184)**.

VAIO® Control Center

Sony Electronics Inc.

VAIO Control Center provides a centralized location that gathers resources to configure your VAIO computer and view your computer's configuration and specifications.
For contacts about the software, see **Program Support Information** **(page 184)**.

VAIO® Edit Component

Sony Electronics Inc.

VAIO Edit Component provides enhanced editing functionality when using Adobe Premiere Pro or Adobe Premiere Elements on your VAIO computer.
For contacts about the software, see **Program Support Information** **(page 184)**.

VAIO® Hardware Diagnostic

Sony Electronics Inc.

For contacts about the software, see **Program Support Information** **(page 184)**.

VAIO® HDD Protection

Sony Electronics Inc.

VAIO HDD Protection allows you to customize your settings for protecting your hard disk drive against shock hazards.
For contacts about the software, see **Program Support Information** **(page 184)**.

VAIO Launcher

Sony Electronics Inc.

For contacts about the software, see **Program Support Information** **(page 184)**.

VAIO Media™ software

Sony Electronics Inc.

VAIO Media™ software brings multimedia to your network, enabling you to share music, video, and still image files between your VAIO® computers. You can set up one or more VAIO computers as "media servers," which store your multimedia files and make them available to other compatible VAIO computers on your wired or wireless network.
For contacts about the software, see **Program Support Information** **(page 184)**.

VAIO® Security Center

Sony Electronics Inc.

Sony cares about your VAIO personal computer. The VAIO Security Center highlights some of the security features your machine includes.
For contacts about the software, see **Program Support Information** **(page 184)**.

VAIO Smart Network

Sony Electronics Inc.

For contacts about the software, see **Program Support Information** **(page 184)**.

VAIO® Touch Launcher

Sony Electronics Inc.

VAIO Touch Launcher allows you to run an application program or change the sound/display settings with the buttons on the launcher window.
For contacts about the software, see **Program Support Information** **(page 184)**.

VAIO Update 3

Sony Electronics Inc.

The VAIO Update utility helps you keep your VAIO® computer up to date by regularly checking the Sony online support Web site for important software updates and information for your specific VAIO computer model.
For contacts about the software, see **Program Support Information** **(page 184)**.

VAIO Video & Photo Suite

Sony Electronics Inc.

VAIO Content Importer and VAIO Content Exporter are included in this utility software. This software enables you to import and export your media files to or from a DVD, digital still camera, or camcorder.
For contacts about the software, see **Program Support Information** **(page 184)**.

VAIO® Wireless Switch Setting Utility

Sony Electronics Inc.

For contacts about the software, see **Program Support Information** **(page 184)**.

WinDVD® software for VAIO® computers

InterVideo, Inc.

- For customers in USA and Canada
  Web site http://www.intervideo.com/jsp/Support.jsp
  Telephone 1-800-772-6735

Xdrive™

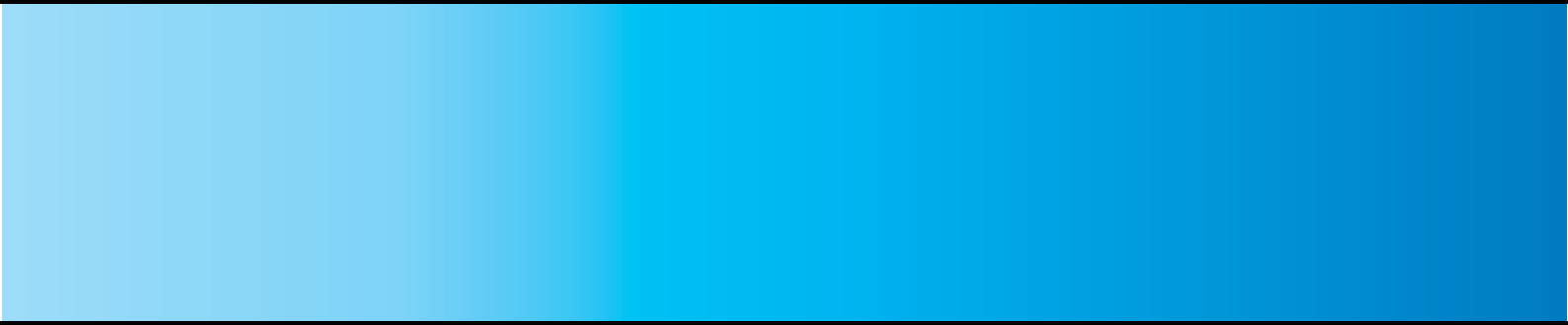
America Online, Inc.

- For customers in USA and Canada
  Web site http://www.xdrive.com/support

Zoom Utility

Sony Electronics Inc.

The Zoom Utility will allow you to magnify a portion of the screen.
For contacts about the software, see **Program Support Information** **(page 184)**.



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